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A new VIA Rail Canada Siemens trainset tests on the Canadian National/Metrolinx Guelph Subdivision in Kitchener, Ont., in August 2022. Stephen C. Host

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From the Editor

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When Amtrak's 83 new short- and medium-haul push-pull trainsets, now being assembled by Siemens Mobility in California, are delivered in 2026, they will wear a new graphic design and bear a new name — Airo (see News, page 5). The name is intended to suggest both 'aerodynamic' and 'arrow' (a nod to Amtrak's 1971 arrow logo).

The trainsets are being built under a $7.3 billion contract and will replace cars that are, in some cases, a half-century old. Amtrak says its newly named Airos will combine sustainable transportation with modern design and world-class amenities.

Sounds good — but we'll have to wait until 2026 to answer Shakespeare's question, "What's in a name?"

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Union Pacific plans to test ground-based conductors

Railroad's program would compare 'expediters' to conductors working from cabs

▲ **Two crew members, carrying hand-held air horns to warn traffic, ride a caboose as a Union Pacific local shoves southbound on A Street in Lompoc, Calif., on Nov. 3, 2017. UP wants to test a program that would significantly change the job of conductors.** Bill Steck

UNION PACIFIC IS READY to launch pilot programs testing the feasibility of redeploying conductors from locomotive cabs to ground-based positions, the railroad said during a December 2022 hearing on the Federal Railroad Administration's proposed two-person crew rule.

UP believes the ground-based conductors — which the railroad dubs "expediters" — would more safely and efficiently play the role conductors do today from the locomotive, Rod Doerr, UP's vice president of crew management services and interline operations, told the FRA.

Positive train control has significantly reduced the conductor's tasks out on the main line, Doerr says, and an expediter would be better able to handle troubleshooting and fixing mechanical problems.

"Union Pacific envisions a role where the expediter receives a call for service from an en route train, drives to that train in a truck, performs the requested service, and drives back to the … base of operations," Doerr says. "Our data suggests in most cases this will take less time than having the on-board conductor attempt the same tasks."

Norfolk Southern also told the FRA it was negotiating with unions to test the concept, while BNSF Railway told *Trains* it has been in negotiations with the SMART-TD union "for some time now on a workable transition to ground-based conductors."

UP is negotiating regarding a pilot program that would be run in four phases, in Nebraska, Colorado, the Pacific Northwest, and Kansas. All are in territory protected by positive train control. Each step will increase in operational complexity over the previous phase, Doerr says.

The railroad believes expediters can respond more quickly and more safely because they won't have to walk long distances over uneven ground from the cab to the problem freight car, Doerr says.

Expediters will have better tools and equipment in their trucks, which the railroad says is safer than having a conductor climb down from a locomotive carrying gear and parts.

And with expediters working from set locations on scheduled shifts, they'll be able to sleep at home and know their days off, which Doerr says will improve their quality of life while enabling UP to more easily recruit and retain workers.

Expediters would be assigned territories, and busy main lines would require multiple expediters to be on duty simultaneously in the same territory, Doerr says.

The FRA is considering a rule that would mandate that railroads operate with two people in the locomotive cab. Its hearing largely saw railroads and labor unions restate long-standing positions — for the unions, that two people in the cab improves safety; on the part of the railroads, that no data supports the idea a second person in the cab improves safety, while ground-based conductors would improve safety and service. — *Bill Stephens*

Amtrak unveils name, look for new corridor fleet

Siemens 'Airo' equipment will replace original Amfleet cars, debut in 2026

AMTRAK HAS OFFERED a first look at the exterior graphics and interior décor for its fleet of Siemens Mobility push-pull trainsets due to enter service in 2026, as well as a new brand name, Airo.

In a December 2022 press conference at New York Penn Station's Moynihan Train Hall, Amtrak President Roger Harris and other officials sketched out the broad outlines of an 83-train fleet of semi-permanently coupled equipment that will operate primarily from Maine to North Carolina and west to Pittsburgh, with some on the West Coast. They will retire the carrier's aged Amfleet I cars, Amtrak's first bought-new rolling stock now nearing 50 years old, and replace other equipment.

Entering service first on the *Cascades* route between Portland, Ore., and Vancouver, British Columbia, Airo trains will resemble Siemens' Venture coaches in service or on order for Caltrans, Amtrak Midwest, Brightline, and VIA Rail Canada. The first car shell is under construction at Siemens' plant at Sacramento, Calif. The production run is estimated to extend into 2031.

Each push-pull trainset will consist of a power car and six to eight trailing coaches, including a cab-control car to eliminate the need for turning. Most will be configured with dual-mode diesel-electric/electric propulsion to facilitate no-engine-change service to and from electrified territory in the Northeast Corridor and Keystone Corridor. They will reach a top speed of 125 mph.

The 83 trainsets comprise 73 dual-mode versions costing about $3.4 billion, with another 10 sets costing $1.5 billion. Seventeen of the sets for Empire Service will employ hybrid battery technology. In all, the contract is worth $7.3 billion, including spare parts and a continuing service agreement. The deal leaves the door open for an additional 130 trainsets if Amtrak's expansion plans come to pass.

Airo business class will feature two-and-one seating. The coach shell is similar to Venture cars elsewhere but the interior design is new.

Amtrak's Airo trainsets will include two forms of dual-mode power, semi-permanently coupled equipment, cab cars for bidirectional operation, and an exterior design in keeping with the paint scheme for long-distance Charger diesels. Two images, Amtrak

Eventually, Airo trains will be deployed on Amtrak and state-supported short- and medium-haul trains, including the *Adirondack*, *Carolinian*, *Downeaster*, Empire Service, *Ethan Allen Express*, Keystone service, *Maple Leaf*, New Haven-Springfield service, *Northeast Regionals*, *Palmetto*, *Pennsylvanian*, *Vermonter*, *Valley Flyer*, and Virginia services.

Harris listed passenger amenities including panoramic windows, ergonomically designed seats, adjustable headrests, and at-seat charging ports. He said the trains will offer "contemporary food service" that will include self-serve options, though he quickly added this does not mean vending machines. The cars will provide digital signage and full accessibility to comply with provisions of the Americans with Disabilities Act.

Harris told *Trains* the Airo name was "one of many that our advertising agency proposed. Airo has aerodynamic implications, it has some alliteration with [the words] Amtrak and Acela, and it has some Amtrak history — the [1971] arrow logo."

Steven Morrison, Siemens' director of business development, passenger mobility systems, explained that in electrified overhead territory, the dual-mode trains will be configured with a single pantograph mounted on a business-class coach that will feed current from catenary to the power car. This application of dual-power propulsion to a semi-permanently coupled trainset is an entirely new technology mix that does not exist elsewhere, he said.

To address capacity constraints and lack of flexibility for high-demand periods created by fixed consists, Harris said Amtrak would simply add another frequency. Currently, when extra coaches are available, Amtrak can add cars to peak holiday trains.

That will still be possible with Airo trains, according to Ray Ginnell, Siemens' vice president for commuter, regional, and passenger coaches, but it's more complicated: Adding or deleting cars from a consist can be done, but only in a shop. Airo trains can run up to 10 cars long, he added.

Delivery of the first Airo trainsets will be delayed up to 5½ months because of changes to food-service car galleys, according to a report by the Amtrak Office of Inspector General. The equipment contract was signed without input on the galley design by food and beverage personnel; eventually it was determined a complete redesign was needed, leading to the delays and an additional cost to Amtrak of $42.5 million. The report cited this as just one example of Amtrak communication issues regarding the Airo program. — *Dan Cupper*

UP pauses use of embargoes to regulate traffic

Move comes after heavy criticism from regulators, shippers in hearings

AFTER TWO DAYS OF HEARINGS in which regulators and shippers were highly critical of the practice, Union Pacific has paused its use of embargoes to regulate traffic.

UP CEO Lance Fritz announced the move in a mid-December letter to Surface Transportation Board Chairman Martin J. Oberman, writing that the railroad would "take a hard look at our use of congestion-based embargoes." The railroad had previously said it would evaluate customer suggestions in the wake of the hearing and report back to the STB on steps it might take to ease the burden on shippers.

UP's use of embargoes soared from 27 in 2017 to more than 1,000 in 2022. In April and November, with congestion rising in some of its local yards, UP asked some carload customers to reduce their inventory of private cars or face the prospect of an embargo that would limit the flow of inbound empties. About 6% of carload shippers have been affected by embargoes.

"We fully understand that imposing embargoes can result in challenges for our customers," Fritz said on the hearing's first day. "I again emphasize we only reach for this option as a last resort. Union Pacific is committed to restoring the fluidity of our network completely, and with that the consistency and reliability of our service to all of our customers."

Oberman sought to link UP's job cuts under Precision Scheduled Railroading to the railroad's service problems.

He noted the embargoes increased as the number of train and engine employees fell from more than 18,000 in 2017 to 13,173 currently. "As I see it, there's a direct relationship between the reduction of employees and increase in embargoes even as operating inventory is going down," Oberman said.

UP has fewer employees because of operational changes under PSR, including moving its tonnage on far fewer trains, Fritz said. The average daily train count in 2018 was up to 900, Fritz said, compared to between 600 and 650 today, so the railroad doesn't need as many people.

Shippers and board members, however, said it was clear UP doesn't have the resources it needs to handle current traffic.

Shippers said they have been forced to bear the costs related to the limits UP placed on their shipping volume, from higher truck transportation costs and railcar storage fees to curtailed production and lost sales.

An eastbound Union Pacific manifest freight clears the signals near Hill 582 on California's Cajon Pass on Dec. 29, 2020. Donald J. Pogue

"Businesses cannot operate successfully under threat of embargo every few weeks," Rob Benedict, vice president of petrochemicals and midstream at the American Fuel & Petrochemical Manufacturers trade group, told the board. "UP's embargoes have become far too frequent and are often open-ended."

Board Member Patrick Fuchs said the cost of poor service is disproportionately borne by shippers and that railroads lack incentives to ensure they have adequate resources available to serve customers and grow the business. — *Bill Stephens*

Amtrak asks STB to investigate 'Sunset' delays

First-of-its-kind filing under 2008 law seeks damages from UP over train handling

IN THE FIRST CASE of its kind, Amtrak has asked the Surface Transportation Board to investigate what it calls the "abysmal" on-time performance of the *Sunset Limited,* which it attributes largely to the operating practices of Union Pacific.

The Dec. 8 filing is the first case brought before the STB under a provision of the Passenger Rail Investment and Improvement Act of 2008, which charges the board with the responsibility to investigate passenger on-time performance issues and how to address those issues. Amtrak has also proposed a framework for the proceeding in a separate 17-page filing.

Amtrak's filing alleges that during its fiscal year concluding in September 2022, and in violation of Amtrak's statutory right to dispatching preference, the train averaged more than 15 instances of freight train interference per trip. These resulted in an average of more than four hours of delays.

The Federal Railroad Administration established on-time performance standards in 2020 — after a lengthy series of court battles — that require 80% of passengers to reach their destination within 15 minutes of the scheduled time. Under those standards, the *Sunset* is currently the worst-performing train on Amtrak's network and among the worst-performing in Amtrak history, the company says.

The filing argues that many of the delays incurred by the *Sunset* are "attributable to UP corporate decisions, operational practices, or failures that result in systemic violations of Amtrak preference rights and cause substandard [customer on-time performance]." Among those, it says, are that UP regularly runs freight trains longer than sidings along its route; when UP dispatches a freight train that does not fit into sidings, "the *Sunset Limited* trains must follow that non-fitter, which can result in hours of passenger delay."

In addition to damages, Amtrak asks for relief "including (but not limited to) an injunction and other appropriate equitable relief to deter UP from taking future actions which may be reasonably expected to result in delays to Amtrak on the *Sunset Limited* route." Any damages, it says, would be used to address the route's capital or operating expenses.

A late-running eastbound *Sunset Limited* passes through Seguin, Texas, on Oct. 24, 2021. Norm Schultze

Union Pacific asked for and received an extension until Jan. 27 to respond to Amtrak's filing, after indicating the passenger operator had no objection to the request. — *David Lassen*

NEWS BRIEFS

Grand Central Madison opening delayed; will debut with shuttles

New York's **METROPOLITAN TRANSPORTATION AUTHORITY** missed a self-imposed, end-of-2022 deadline to begin Long Island Rail Road service to **GRAND CENTRAL MADISON**, the new station beneath Grand Central Terminal, as station work continued. No launch date was set for initial service, in the form of shuttle trains between the new terminal and the Jamaica station in Queens. Full service, which will represent completion of the long-delayed **EAST SIDE ACCESS** project and see the LIRR add 274 weekday trains each day, will come later in 2023.

The **GOVERNMENT OF ONTARIO** has placed an order for three bidirectional trainsets from **SIEMENS MOBILITY** for revival of *Northlander* service on Ontario Northland Railway between Toronto and Cochrane, Ont. The train last operated in 2012. Government of Ontario

A federal grant application from the **SOUTHERN RAIL COMMISSION** seeks about $179 million to improve the route of planned **AMTRAK** service between New Orleans and Mobile, Ala. The grant, and another $44 million in matching funds, including $9.9 million from **CSX TRANSPORTATION** and $6.2 million from Amtrak, would fund infrastructure work including a new bypass at CSX's Gentilly Yard in New Orleans; extension of four sidings; three new sets of crossovers on **NORFOLK SOUTHERN** "Back Belt;" and other improvements. Service would start in 2023. The agreement between Amtrak and the freight railroads remains confidential.

Fixes

AMTRAK MECHANICAL EMPLOYEES

The story "Addressing Amtrak's capacity crisis" (December 2022) misreported where furloughs occurred. While Amtrak furloughed more than 1,300 employees in fiscal 2021, the company says none were in the mechanical department.

STATION, BUT NOT STATIONARY **Built in the 1850s by the Cincinnati, Hamilton & Dayton Railway (later the Baltimore & Ohio Railroad), one of two structures making up the Hamilton, Ohio, depot eases down Martin Luther King Jr. Boulevard on Dec. 20, 2022. The building was moved 1,100 feet from CSX Transportation property to a city-owned lot. The building's history includes visits from four U.S. presidents. CSX donated it to the city, which will restore it for a yet-to-be-determined use. A second structure was slated to be moved in January.** Robert Federle

BRIGHTLINE IN BOCA RATON **Brightline opened two new stations on its Miami-West Palm Beach, Fla., route in December — at Boca Raton (above) on Dec. 21 and Aventura on Dec. 24. Ribbon-cutting ceremonies were held for both facilities on Dec. 20, but opening of the Aventura station — which is eventually planned as the northern terminus of commuter service from the downtown MiamiCentral station, about 13 miles away — was delayed slightly over construction inspections.** Sol Tucker

RED RIVER FIRST **Red River Valley & Western's first SD70MAC, No. 6622 — formerly BNSF No. 8911 — is spotless as it shows off its new paint scheme at Metro East Industries in East St. Louis, Ill., on Dec. 20, 2022. The RRV&W owns and operates 577 miles of track in North Dakota.** Mark Mautner

BNSF's BIG bet in the California desert

Barstow sorting hub will alter the intermodal landscape

Bill Stephens
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Analysis: Trains.com

Can a railroad single-handedly preserve the intermodal dominance of North America's biggest port complex? BNSF Railway is making a $1.5 billion bet that the answer is yes.

The railroad announced in October that it will build a massive new intermodal facility in Barstow, Calif., to expedite the handling of freight imported and exported through the ports of Los Angeles and Long Beach.

The stakes are high for the San Pedro Bay ports, which have seen their share of imported cargo fall for more than a decade, a trend that was accelerated by pandemic-related congestion that made national headlines. The stakes are high for BNSF, too, because its intermodal fortunes are intertwined with how competitive the ports are.

Many of the containers that arrive at the ports are bound for destinations outside of the Los Angeles Basin, mostly in the Midwest and Texas. The lion's share of that freight rides BNSF stack trains to inland points. These containers don't have to enter the United States through Los Angeles and Long Beach. They could easily be routed to ports on the East Coast, Gulf Coast, or British Columbia. And that's exactly what's been happening.

The San Pedro Bay ports have been losing market share to ports that are more fluid and less costly. BNSF's new sorting hub — the Barstow International Gateway (BIG) — is designed to halt this trend and protect the railroad's intermodal business.

A BNSF Railway eastbound intermodal train that originated at the ports of Los Angeles and Long Beach, climbs California's Cajon Pass in September 2021. Bill Stephens

BNSF has a knack for understatement. BIG is too small a word for a one-of-a-kind, 4,500-acre facility that will be built on land BNSF owns on the dusty outskirts of Barstow, an important junction town with a long railroad history.

BIG will include an intermodal terminal, support yard, and warehouses where freight will be transloaded from 40-foot international containers into 53-foot domestic boxes before being put back on trains. At full buildout, BIG will be more than twice the size of BNSF's sprawling logistics parks in Chicago and at Alliance, Texas. The facility will handle two million containers annually, a figure equal to 36% of BNSF's 2021 intermodal volume.

The idea behind BIG is that it will reduce the amount of time containers spend waiting on docks, as well as eliminate the 80-mile dray moves for freight that's currently trucked from the ports to the Inland Empire — a region in Southern California — for transloading before being trucked to one of BNSF's intermodal terminals for the trip east.

Currently, containers are taken off ships, stacked on docks, and eventually loaded on well cars. Intermodal veteran Ted Prince notes that the largest ships can carry enough containers to fill seven trains. Some boxes have to wait for six trains to get loaded and depart before they get to move inland. The process is so slow, he says, that transloaded freight can arrive in Memphis before those long-lingering international boxes leave the dock.

BIG promises to change this. Containers will be loaded directly from ship to rail. Existing BNSF trains will haul them through the Alameda Corridor in Los Angeles and up the BNSF main to Barstow. Once there, the containers will take one of two paths. They'll either be sorted by destination and loaded on eastbound trains or their cargo will be transloaded into domestic containers at on-site warehouses, then catch eastbound trains.

This will reduce congestion at the San Pedro Bay ports, increasing their capacity and efficiency while nearly eliminating drayage costs for transload cargo. The ports say all this will make them more competitive with East Coast and Gulf Coast ports. And what's good for the ports is good for BNSF.

Also in the railroad's favor: BIG's advantages may attract more international container lines to BNSF's rails and be a magnet for transload centers for big retailers like Walmart. That will feed the transload pipeline of BNSF intermodal partner J.B. Hunt. BNSF will get an operational boost from BIG, too. BIG will assemble westbounds to match track lengths of BNSF's terminals at Hobart and San Bernardino that will reduce switching moves on the main.

There's no timeline yet for construction, and BNSF says permitting may take a few years. But it's clear that once BIG is up and running it could be a game-changer for BNSF, the only railroad you can imagine investing $1.5 billion in a single project.

A remarkable career remembered

A retired railroader considers safety

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My duties at Conway Scenic Railroad involve safety. In addition to sitting on the Joint Loss Committee that reviews safety incidents, I also review the rulebook and timetable to keep them relevant. Discussions about railroad safety led me to David Lavery, whom our trainmaster Mike Lacey met through his connections at CSX and the Brotherhood of Locomotive Engineers and Trainmen. In 2019, Lavery retired from a 42-year railroad career that began when he hired out with Chessie System's tie-unit of the track department at Connellsville, Pa., in 1977. "When I started, my checks said Baltimore & Ohio, but I really worked for the Chessie System," he said. In those days, while the railroad had some mechanized track machines, much of the work was still done by hand. "It was an interesting experience. On my first day, the supervisor told the gang, 'Unfortunately, someone sabotaged the spike machine, so today we'll do things the old fashioned way.' This was hard work and gave me respect for the men on the track gang."

That winter Lavery was furloughed from the track gang, so for a time he got a job doing non-railroad work. But railroading was in his blood — his father had been a railroad clerk — and before long he was back working for Chessie System, this time as a brakeman. He recalls jumping on and off moving equipment: "Working a heavy train, we'd need to jump off the engine and run ahead to line a switch to keep the train moving." Lavery said, "There were accidents, and that was part of the learning process. But we didn't have the same hours-of-service regulations that we have today, although there was still a 12-hour limit and the rules were pretty different then (but it wasn't as hard to get time off as it is today). Men would often work when they were exhausted from long hours. They'd make mistakes."

Lavery recalled how he lost a friend during his early years: "In 1979, I was in fireman service and learning to put engines together at Connellsville Yard." Historically, the men putting engines together had blue flag protection that prevented equipment from being moved while they were working, but the railroad had eliminated the shop, and cut the yardmaster position. Lavery's friend was working on a curve with very tight clearance between the engines and an adjacent track when he was struck by a yard job making a shoving move. "He died of trauma. This was devastating for me."

The memory of this terrible accident led Lavery to discuss with me many of the changes in the industry. "CSX came about [due to] the Chessie and Seaboard consolidation. I wonder how many people even remember this. As a result of CSX, I transferred to Tampa, Fla., in 1988 and stayed there until I retired. Tampa had offered the prospect of working scheduled trains. There was lots of business then: phosphate trains, the [Tropicana] Juice Train, and trains carrying automotive traffic."

Over time, he became more involved with BLET and was elected as a legislative representative. Eventually, the union leaders urged him to run for BLET chairman in Florida, a position he obtained in 1996. In this role, he was involved with worker safety among other things. "I was involved in teaching our members how government affects our work, but also spoke with local, state, and federal officials, including Florida's governor, about issues regarding railroad safety," he said. This was a period of great traffic growth, when crew districts lengthened and trains became longer and heavier. This resulted in fewer employees doing more work.

Lavery is a believer in maintaining two crew members in the locomotive cab. "You need two people to report and record any number of odd situations that may arise. Engineers potentially have to deal with a variety of hazardous situations, including daily events like watching out for trespassers, minding road traffic at grade crossings, and watching for signal abnormalities. In an emergency situation, slowing a train by as much as 5 mph can make the difference between living and dying. Having that extra pair of eyes in the cab can make a difference in so many situations, especially when running an engine backwards restricts [your] vision, which happens more often than you might think. That second crew member may give the engineer that extra few seconds to apply the brake, giving the train enough time to slow down enough for someone to live another day."

Lavery paused, thinking back to that terrible day in 1979. "What price can you put on life?"

In the mid-1980s, CSXT melded operations of the Chessie System and Seaboard System railroads. On July 27, 1987, a westbound freight on the former Baltimore & Ohio pauses at Sand Patch, Pa., as its tail-end helper engines are cut off. Brian Solomon

POPLAR RIVER MINE RAILWAY

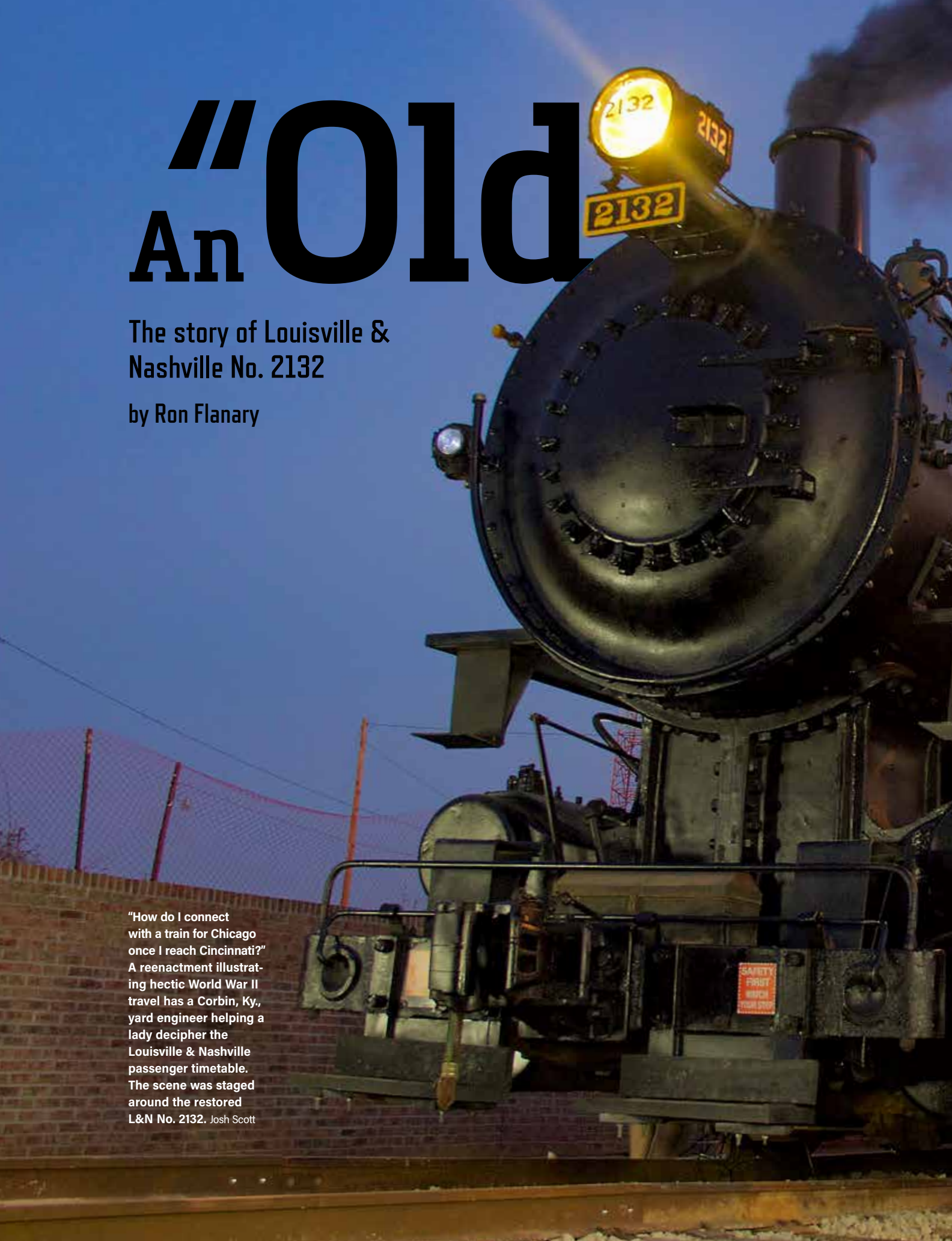
At a mere 12 miles long, south central Saskatchewan's Poplar River Railway supplies mined lignite coal from a loadout to the Poplar River power generation station near Coronach, Sask. The railway operation was built in 1978 to become a rolling coal-supply conveyor belt to feed the two power generation units for Saskatchewan Power Corp. The railway has an outside-world connection near Coronach with the Great Western Railway, but runs autonomously with its own locomotives and hopper cars. A balloon track at each end allows for quick loading and unloading from the bottom-dump cars to ensure multiple daily round trips, with 20 to 40 cars each trip. SD40-2 No. 6973, a former Ontario Northland unit, is heading south toward the Poplar River power plant with a load of lignite coal from its nearby mine. This operation is not widely known due to its rural location and being far from any major rail route. With more and more industrial operations ending, it's worth focusing on one such specialized enterprise just a few miles north of the U.S./Canada border. — *Robert W. Scott*


6973
6973
PRMX

"An Old

The story of Louisville & Nashville No. 2132

by Ron Flanary



"How do I connect with a train for Chicago once I reach Cincinnati?" A reenactment illustrating hectic World War II travel has a Corbin, Ky., yard engineer helping a lady decipher the Louisville & Nashville passenger timetable. The scene was staged around the restored L&N No. 2132. Josh Scott

Reliable"

Comes home to Kentucky

No. 2132 was assigned to the L&N's huge Cincinnati-area yard at DeCoursey, Ky., when photographed there in 1939. Engines like No. 2132 were built to a strictly utilitarian design as they performed the "grunt" work in yard and switching assignments all over the L&N's system. L&N Historical Society

"ARE YOU FAMILIAR WITH L&N 2132?"

The inquisitor was Jeff Cawood, then a graduate intern working for the Corbin (Ky.) Tourism and Convention Commission. The 2014 occasion was a meeting between Cawood and his boss, Maggy Monhollen, Jeremy Williams of the Kentucky Extension Service, and this writer. Cawood immediately had my attention, and I answered in the affirmative.

Louisville & Nashville Railroad steam historians knew of the wayward 0-8-0, one of only three extant L&N steam locomotives. All the L&N's USRA-design Mountains, Mikados, home-built variations of several wheel arrangements and classes, and, of course, the 42 Baldwin and Lima-Hamilton "Big Emma" 2-8-4s that were the high-water mark of steam on the Old Reliable, had been reduced to scrap. The trio of survivors included Kentucky Railway Museum's 1905-built Rogers Pacific-type No. 152 (operable until several years ago, and now undergoing its third rebuild after retirement from regular service in 1951); an Alco Richmond Works 0-8-0, No. 2152, obtained by the Kentucky Railway Museum from the engine's second owner, Republic Steel; and L&N No. 2132. That was the engine Cawood suggested might be repatriated to Kentucky, where it could become the centerpiece exhibit of a railroad museum in Corbin. At that time, none of us could foresee CSX downgrading the Corbin yard and closing the locomotive shop and servicing facilities — a move precipitated by the rapid decline of coal traffic from the once-busy eastern Kentucky mines. As the idea gained momentum, it was clear Corbin needed something to smile about.

No. 2132 was sitting forlornly at Gulf Power in Sneads, Fla., when this photo was taken in October 1967. There are no recollections of it being fired up again this late, despite the full coal load in the tender. Phillip C. Kotheimer, L&N Historical Society

The story of L&N Nos. 2132 and 399 long-scrapped sister locomotives constructed at the "Old Reliable's" (L&N's traditional sobriquet) huge South Louisville Shops is told in the companion story by Charles Buccola. No. 2132 was completed in 1923 with builder number 393. The first 18 C-1 class engines were built at South Louisville in 1915-18. The first eight (2100-2107) had slope-back tenders, while all subsequent engines had conventional tenders with an additional 500 gallons of water capacity. Some of the C-1s had centered headlights, but most had them up top, like No. 2132. The next six slots in the number sequence were taken by a like number of the Alco USRA model 0-8-0s in 1919. No. 2132 was in the final group (2124-2139) of 16 homemade 0-8-0s that were the last new locomotives built by the

On Jan. 18, 2016, L&N Railroad No. 2132 emerges into the sunshine of the Bluegrass State after a very long hiatus. The 4,200-foot dual highway tunnels under historic Cumberland Gap on U.S. Route 25E were completed in 1996, avoiding the dangerous old alignment across the "Gap" nicknamed "Massacre Mountain." Two photos, Ron Flanary

The cranes are in place on Jan. 18, 2016, to lift No. 2132 off the trailer and onto the display track in Corbin, Ky. Next step: bringing the deteriorated engine and caboose back to a presentable state. The restoration a success, No. 2132 stands next to the former L&N depot.

L&N. During the mid-1920s the L&N purchased 20 more USRA-design 0-8-0s, but the days of new steam locomotives from its own shops were over.

Documentation on No. 2132's service life is sketchy, but photographic evidence shows her working at the big yard at DeCoursey, Ky., just south of Cincinnati, in 1939. Whether or not she gravitated south to work the double yards at Corbin is speculation, but the C-1s were common there. Sometime after World War II, it's likely the engine moved south. That might help explain why No. 2132 was chosen for sale to Gulf Power.

No. 2132 still had flue time and was sold by the L&N in 1951 to Gulf Power at Sneads, Fla., for $6,184, delivered to Sneads with a load of coal and ready to run. A new coal-fired steam plant would be built a little south of the L&N's main line across the Florida panhandle and the power company needed a locomotive to shuttle construction materials between the L&N interchange and the plant site. The engine served its purpose well and was kept for periodical switching jobs. As late as 1964, she was still operable.

Bainbridge, Ga., is 30 miles north of Sneads. The city is served by rail, but not the L&N. A former Seaboard Air Line branch, plus Atlantic Coast Line's Montgomery (Ala.)–Waycross (Ga.) line, served Bainbridge. In 1981 the Bainbridge mayor proposed acquiring the old 0-8-0 from the power company and moving it to Bainbridge for display. The city's public works crew was tasked with getting the 110-ton locomotive and tender to Georgia. There was never consideration to restore No. 2132 to operation, so the locomotive was dissected using acetylene cutting torches, including slices through the frame, center drivers, and detachment of the boiler. To make it lighter, all the superheater and boiler tubes were removed. The public works superintendent later recalled it took virtually every piece of equipment the city could muster to get No. 2132 to Bainbridge. It took two weeks to complete the job. Once there, the pieces were welded back together so it would appear presentable. Somewhere along the

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The South Louisville Shops

Birthplace of L&N No. 2132

Sprawling across 55 acres and filling 35 buildings, L&N's South Louisville Shops complex could build a new locomotive, make repairs, maintain freight cars, and even help area museums with their railroad-related mechanical needs. The shops were closed in 1990. Today, the ground is occupied by the University of Louisville football stadium. L&N Railroad

ON A SUNNY SATURDAY in August 1980, more than 25,000 visitors flocked to the South Louisville Shops open house, climaxing a three-month celebration marking the diamond jubilee of Louisville & Nashville's major shop facility. Featured displays included Clinchfield Railroad steam locomotive No. 1 (a stand-in for the hundreds of steamers that went through the Shops), two vintage diesels — L&N E6 No. 770 and Monon BL2 No. 32 — and L&N U23B No. 2803. The GE locomotive had been rebuilt by shop forces after a wreck, sporting a special 75th anniversary logo incorporated into its Family Lines paint scheme.

The Shops being celebrated were constructed between 1902 and 1905 to replace antiquated facilities downtown near Union Station. When the facility was completed in 1905, it was one of the largest railroad shop complexes in North America. As was a common business model among large railroads a century ago, the 35-building complex occupying 55 acres was largely self-sufficient. The Shops could do it all — foundry, forge, carpentry, and more — to provide locomotives and cars to serve on the railroad. L&N's primary rail yard and roundhouse serving Louisville were built adjacent to the Shops. In March 1904, the Louisville *Evening Post* carried the headline that "South Louisville Shops will be the largest in the South and may employ 3,500 men." Over the years that number grew to around 4,000 employees, who daily answered the call of the shop whistle. While shops at other locales on L&N's system also serviced equipment, South Louisville remained the paramount facility.

Between 1905 to 1923, 400 new steam locomotives were constructed by L&N in the Shops. In the first year of full operation, management called upon the Shops to produce a quintet of H-23 2-8-0s similar to a Baldwin product received in 1903. Next up were four K-1 Pacifics similar to five prototypes obtained from Rogers in 1905. Over six dozen 2-8-0s and 4-6-2s were rolled out in its first five years.

The construction of new locomotives hit full stride in the second decade of the 20th century under the leadership of Ernest O. Rollings Sr. and Millard F. Cox Sr. Rollings was assigned as master mechanic in 1910. Mechanical engineer Cox, previously with Richmond Locomotive Works, joined L&N in 1911. They and their staff designed and built new locomotives of four different wheel arrangements.

Their first designs were classes H-28 and H-29 Consolidations, of which 94 were home built through 1914. These husky 2-8-0s were designed to handle mainline freight.

Turning to L&N's passenger service, the team designed, and Shops constructed, 63 K-3 and K-4 Pacifics between 1912 and 1922. Traffic demands of World War I led L&N management to call for accelerated delivery of new locomotives. Demonstrating the prowess of the Shops, K-4 Pacific No. 238 was assembled in a five-day period. Beginning with components on Monday, Feb. 4, 1918, shop crews completed assembly on Friday, Feb. 8, and the locomotive headed for the roundhouse on Saturday.

The largest, heaviest locomotives constructed at South Louisville were 96 Class J-1 and J-2 Mikados, built from 1914 to 1921. The first of their wheel arrangement on the L&N, the 2-8-2s were designed to haul L&N's heavy coal trains.

For yard and terminal work, the C-1 class 0-8-0 went from the drafting table to the shop floor, 34 being built from 1915 to 1923. The ini-

tial group of eight merited coverage in *Railway Age Gazette* of 1916, including praise of their "ingenious power reverse gear" invented by Cox. A group of 10 0-8-0s, one of which was No. 2132, were the final new locomotives built by L&N's Shops; the program ended in 1923. Thereafter, all new locomotives came from outside builders, the Shops focusing on heavy repairs. L&N 2-8-4 No. 1976 was the last steam locomotive to receive heavy repairs in 1952.

The Shops were equally capable of building and repairing rolling stock. A new steel-car shop opened in 1914 providing the capability to construct all-steel cars. Thousands of freight and passenger cars were produced in the years that followed. Many of these cycled back through the shops for maintenance or complete rebuilding.

Over the decades, the Shops were enlarged and improved to keep up with technology. A new diesel shop was completed in December 1948, then enlarged in 1951, as South Louisville continued its leadership in locomotive maintenance. In 1975 the diesel maintenance area received a major modernization known as the "Spot System" to expedite locomotive maintenance. An update and expansion of the freight car department in the 1960s enhanced repair and construction of freight cars.

But the key factor of the Shops successes was the people rather than the buildings they worked in. Well into the diesel era, the job title "boilermaker" was not an anachronism at South Louisville. When famed Civil War locomotive *The General* arrived for restoration in 1961, many experienced steam mechanics were still on hand to carry out the work on the 4-4-0. Across town, the Kentucky Railway Museum also benefitted from expert help. Several boilermakers were dispatched to the museum's site to assist with the hydrostatic testing of L&N Pacific No. 152 when it was restored to operation by the Museum in the mid-1980s.

The cadre of craftsmen — boilermakers, machinists, blacksmiths, carmen, carpenters, electricians, painters, pipefitters, upholsterers, draftsmen, and laborers — included family members spanning generations. For example, E. O. Rollings Sr., previously mentioned, served as superintendent of the Shops until 1948. At the time of his retirement, his son, Curtis Rollings, was assistant superintendent. Another son, Ernest O. Rollings Jr., later became shop superintendent until his retirement in 1976.

David Orr (assistant superintendent of motive power) recalled that families were a factor in shop life when nepotism rules were not so strict. It was common to have children, cousins, aunts, and uncles working in various crafts thus creating a bond for job security and loyalty to the company. He mentioned, as an example, the Gambrell family. Three brothers had worked in the shop, three sons and a grandson came later in various crafts in addition to other relatives who worked at other locations on the L&N. Apprentice programs for each shop craft ensured that skill sets would be passed on to each new generation. South Louisville was known for its opportunities to encourage family social life, having a co-op club, softball teams, bowling league, fishing club, square dancers, musicians, and even a chorus.

The South Louisville Shops celebrated 75 years with an open house in August 1980. Locomotives old and new were exhibited, including Monon BL2 No. 32 and L&N U23B No. 2803, which shop forces rebuilt after a wreck and painted specially for the occasion. Two photos, John Fravert

Products of the L&N's South Louisville Shops (from left): Nos. 1303 and 1291, both class H-8 2-8-0s built in 1911, No. 2149, a member of the C-2 class 0-8-0s constructed between 1922 and 1925, and No. 2125, a C-1 class 0-8-0 completed in 1923. No. 2132 is from this same class.

Although some workers came from miles away, neighborhoods surrounding the Shops were heavily populated by L&N employees. The Shops presence could be felt and heard throughout the neighborhood. Machinist Charlie DeWitt recalled noting that you could set your clocks by the shop whistle.

From its opening through the diesel era, thousands of men and women had worked in the Shops. By 1980, employment had declined to about 1,600 people. Coincidently, within weeks of the diamond jubilee celebration, the merger of L&N-parent Seaboard Coast Line Industries with Chessie System had been approved, forming CSX Transportation. In 1987, CSX announced it would close the Louisville locomotive repair shops, eliminating 800 jobs. On Oct. 14, 1987, shop forces gathered around former L&N SD40-2 No. 3565 (then-CSX No. 8193), the last locomotive to be repaired at South Louisville. The move of locomotive maintenance was completed in 1988; car repair operations also ended that year. Machinist DeWitt said that after his final day of work, he changed clothes in the same building where his grandfather had changed clothes, picked up his paycheck, and turned out the lights for the last time.

The shutdown was completed in 1990, the buildings demolished in 1993-94.

Today, the property once occupied by the Shops and yard is the site of University of Louisville's Cardinal Stadium. Opened in 1998, the 60,800-seat venue hosts Cardinal football, rock concerts, and other events. Marking a half hour before a football game and each time the home team scores, a mighty blast is sounded from the shop whistle that for decades had called the Shop forces to work.

— Charles Buccola

On June 15, 2017, the restoration of No. 3132 is nearing completion. The painting contractor sprays a finishing coat of shiny black DuPont Imron paint beneath the cab and behind the firebox. When done, No. 2132 looked like it was fresh from the South Louisville Shops. Ron Flanary

The author presented replica number plates for No. 2132 to (left to right) Jeremy Williams, Jeff Cawood, Maggy Monhollon, and Sid Johnson. A conversation with Jeff Cawood sparked the idea to pursue the project, saluting the L&N's railroad heritage in Corbin, Ky. John Landrum

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way a steel L&N bay window caboose, No. 1056, was added. As with most park engines, L&N No. 2132 became something for kids to climb on. It was covered with a cramped metal shed for a time, and occasionally repainted, but mostly it slowly deteriorated. Collectible items like the bell, whistle, builder, headlight, back-up lights, and number plates "disappeared" over time.

When Monhollen and Cawood approached the Bainbridge city manager and council in early 2015, there was some sentiment to making the engine available to Corbin. Members of the L&N Historical Society were enlisted to provide historical context as well as added political "grease." Sid Johnson, L&NHS president, a veteran professional railroader, who started in the L&N mechanical department as a college summer co-op in 1965, lived just 93 miles away in Florida.

"I knew the importance of the engine as a rare artifact of Kentucky and the L&N Railroad's history, so I made appearances before the city council two different times to support the donation and field questions," said Johnson.

Ultimately, a deal was struck. Corbin could have No. 2132 and the caboose, but it would have to be moved at no expense to Bainbridge — and soon. Sadly, Sid passed away in 2022, but he lived to see CSX's project through to completion.

Heavy-duty cranes were deployed at both ends of the move and the loading began in early January 2016. At precisely 9:15 a.m., on a frigid Jan. 18 — Martin Luther King Jr. Day — L&N 0-8-0 No. 2132 rode a heavy duty trailer out of the north portal of Cumberland Gap Tunnel on U.S. Route 25E and into the sunlight of her first day back home in Kentucky after nearly 70 years. Later that day, she was carefully unloaded onto the new display track just north of the passenger depot in Corbin — beside the former L&N main line.

A detailed scope of work was drafted with input from the L&NHS that covered everything that should be done to bring the locomotive back to its as-built appearance. Contractors were engaged to do the work, but the engine was in sad shape. An appeal went out to friends and members of the L&N group to find replacements for lost appurtenances. Item by item, a headlight, bell, whistle, and several other needed appliances were donated. A replica of No. 2132's numberplate was cast in aluminum (along with some extras in the event a vandal made off with the new one); a new boiler jacket had to be fashioned and installed; new wooden footboards were cut and placed; the handrails were replaced or straightened; and new metal would have to be installed as the sides of the cab were rusted badly.

The large smokestack casting had deteriorated at the base, so it was decided that the original stack be placed in the adjacent depot as a display item while a new one was fabricated. The ash pan also needed quite a bit of patching. Working from lettering diagrams provided by the L&NHS, No. 2132 was repainted in her workaday, utilitarian black with yellow-gold lettering. LED lighting was installed to illuminate the headlight and cab interior.

Given the limited financial resources of such groups, the L&N Historical Society

Now boarding for Cincinnati

WELCOME TO THE LOUISVILLE & NASHVILLE RAILROAD'S Corbin, Ky., passenger station on a cold and snowy December evening about a week before Christmas, 1948. The "Big Emma" (M-1 class No. 1962, one of four equipped with steam heat connections and air signal lines for passenger service) has just replaced an L-1 class 4-8-2 on First No. 32, the 13-car baggage, mail, express, and coach section of the *Southland,* while the locomotive on the left — L-1 No. 421 — will depart with train No. 22 to Louisville after both sections of No. 32 depart for Cincinnati.

On the right, C-1 class 0-8-0 switcher No. 2132 stands with a couple of sealed baggage cars of mail and express swapped out on First No. 32 while engines were being exchanged. No. 2132 was saved from scrap and after many years in Bainbridge, Ga., was returned to Kentucky, cosmetically restored, and placed on display immediately to the right and slightly below the grade of the track it's on here. A watercolor painting by Ron Flanary

was not able to be a grantor organization for many deserving restoration projects. However, after much deliberation, the group chose to reserve $5,000 to be granted to the preservation of any former L&N steam locomotive, provided the remaining funds to complete the job were in place and the project was moving — again, there were only three candidates in existence. An oversize check was presented to Monhollen and her board of directors in May 2016 by Sid Johnson, society president.

"It was at that point I really began to appreciate that our organization had been a catalyst in preserving the last of the 400 steam locomotives built by the L&N at South Louisville," Johnson remarked. "This was the railroad that first employed me, and we all felt this was the ultimate tribute to the L&N, and particularly its employees."

Shortly after the locomotive was dedicated in 2017, a pre-engineered structural steel shed with lighting for added security and night viewing was built to protect the equipment from the elements. Within sight of No. 2132 is a public square with a life-size bronze statue of Corbin's most famous citizen, Colonel Harland Sanders. The Colonel's first restaurant was in Corbin, and he did a bustling business selling fried chicken during the Great Depression. The facility is still in service, with the original section retrofitted to its appearance at the time Colonel Sanders was developing his unique technique to season and pressure-fry chicken. No doubt Colonel Sanders witnessed L&N 0-8-0s like No. 2132 working the yard in Corbin every day, swapping out cars on some 20 daily passenger trains in World War II, including the Midwest-to-Florida *Flamingo* and *Southland,* or wrestling with a string of loaded coal hoppers being doubled over to make a "main-tracker" coal train for the Cincinnati gateway.

It would be wonderful to see smoke curling from the stack of No. 2132 with 200 pounds of steam pressure in the boiler again — poised to turn the back-and-forth movement of its valves and cylinders into the circular motion of its eight drivers.

While that isn't possible, the most important thing is that the locomotive still exists. It's now back in Kentucky where it served its builder and operator — the Louisville & Nashville Railroad — for so many years. It's not a "Big Emma" or an L-1 Mountain, but L&N No. 2132 miraculously made it back home instead of being reduced to scrap metal. Governmental and civic leaders in Corbin deserve the credit for appropriating the funds and seeing the project through to completion. No. 2132 is quite a bit more than another "park engine" — it's a priceless artifact of Kentucky's rich railroad history.

Steven Foster's tune, "My Old Kentucky Home," couldn't be more appropriate. After being lost for so long, the prodigal son has returned to the Bluegrass State. T

VIA Rail Canada Charger SCV42 locomotive No. 2201 leads a Siemens Venture trainset through Mosborough, Ontario, during testing on Aug. 11, 2022.
Stephen C. Host

VIA NEW TRAINS, NEW CHALLENGES

Canada's passenger operator welcomes Siemens equipment, but lacks political support

Story and photos by Bob Johnston

TRAFFIC ON "THE 401" — Ontario's main highway — is oppressive. Every day, this and other limited-access roads from Windsor, Ontario, to Quebec City, more than 700 miles northeast, are clogged with hours of excruciating traffic jams. Though the corridor is a ripe travel market that VIA Rail Canada has focused on since the company's inception, the opportunity to provide a comfortable, reliable alternative has never been greater.

So it's not surprising VIA's new president, Martin Landry, enthusiastically accompanies *Trains* on a September 2022 tour of a Siemens Venture trainset, intended for this market, at the company's Montreal Maintenance Centre. Landry had been immersed in VIA's procurement process before being elevated to his current position in June. While technicians continue revenue service preparations, he surveys the coaches and cab car and confidently predicts the new fleet will capture a larger slice of corridor travelers than VIA has been able to attract with a hodgepodge of equipment dating from the 1940s to the 1980s.

Sleeping car *Sherwood Manor*, built for Canadian Pacific in 1955, undergoes an interior and mechanical overhaul at VIA's Toronto Maintenance Centre on Sept. 15, 2022. Shortly thereafter, concerns surfaced about structural integrity of VIA's heritage car fleet.

"We were pretty sure the Siemens base was a good train, but we wanted a great train, and that's why we have worked so hard on details and testing," Landry says.

Unfortunately, the 32 five-car trainsets and Siemens SCV42 Charger locomotives — purchased for a total of C$989 million, about $725 million U.S. — are debuting just as some of VIA's long-festering, congenital deficiencies intensify.

MOUNTING ISSUES

The wave of problems currently facing the company include:

• **FAILING EQUIPMENT.** Government funding for new rolling stock over VIA's previous four and a half decades was limited to the purchase of Bombardier LRC (Light-Rapid-Comfortable) trainsets in the early 1980s, and subsequent acquistion of F40 and P42 locomotives.

Everything else hurtling across Canadian provinces was manufactured well before VIA was spun off from Canadian National in 1977, save for its Renaissance fleet. That was acquired after the overnight Channel Tunnel trains were made expendable following British Rail's demise. Stainless steel passenger cars and the English castoffs have undergone as-needed maintenance since then, but keeping these relics in good repair has been increasingly torturous and expensive.

VIA CEO Martin Landry poses with a new Siemens SCV42 locomotive.

Now VIA Rail Canada's ability to provide service nationwide is being severely threatened by the long-running, Band-Aid approach. In mid-October 2022, unoccupied "buffer" cars began bracketing any train with stainless steel passenger cars. This is "to reduce the consequences in the unlikely event of a train-to-train collision," according to a company statement that also noted the equipment "is safe to run under normal operating conditions."

Almost 200 of the 1950s-vintage cars, mechanically rehabilitated with head-end power in the 1990s and tastefully refurbished periodically ever since, currently ply every route. There is no way VIA can operate today, next week, or next year without the HEP-1 (ex-Canadian Pacific) and HEP-2 (originally purchased by U.S. roads) hand-me-downs.

The company declined to reveal what defect prompted the buffer-car action, subsequently formalized in a safety order by Transport Canada — the nation's transportation agency.

A prescribed series of tests and an evaluation is taking place through March. After that will come a determination if structural repairs are needed and how widespread they would be. But deployment of the unoccupied cars at least through 2023 will be a constant, visible reminder of VIA's tenuous equipment situation.

This also places in doubt the prospect that stainless steel coaches currently assigned to the Windsor-Quebec corridor could, with arrival of the new equipment, be used to increase capacity or upgrade service elsewhere.

VIA has had success with such enhancements in the past. With a shot of federal economic stimulus funding in 2009, VIA reconfigured four *Park* dome-observation-lounges and eight *Chateau*-series sleeping cars into luxury vehicles. The legacy *Chateau*s had entered service on Canadian Pacific's *Dominion* and *Canadian* in 1955 with open sections and typical post-World War II streamliner rooms. They were transformed into double-bed-equipped, all-bedroom cars with huge picture windows and separate bathrooms worthy of any cruise ship [see "Luxury Re-imagined," May 2015]. These command Prestige Class fares ranging from C$11,257 to $14,150 ($8,250 -$10,370 U.S.) for a tax-included Toronto-Vancouver bedroom for two on VIA's *Canadian*.

Any similar repurposing plans for the corridor HEP fleet must now be shelved, perhaps indefinitely.

• **LIMITED POLITICAL SUPPORT.** The latest setback is a function of the Canadian government's long-running sink-or-swim attitude toward VIA. Created as an "Order-in-council" Crown Corporation expected to function on a combination of ticket revenue and whatever appropriation is included in the annual federal budget, VIA must survive "at arms length" from other government enterprises and privately owned railroads. Translation: it receives no special advantages on behalf of the traveling public it is charged to serve.

Unlike Amtrak, no statute entitles VIA to dispatching priority when sharing routes

with freight trains; dealing with track owners is regarded strictly as a private matter. This led to plummeting on-time performance and lengthened schedules after Canadian National transitioned from government-owned to for-profit enterprise in 1995, and provisions for passenger-train preference were specifically excluded.

Operations of the transcontinental *Canadian* clearly show the impact. The train currently takes four nights and days between Toronto and Vancouver, British Columbia, more than 24 hours slower than some previous schedules. Since CN can dictate slots available on that route, the railroad's project to lengthen sidings through Saskatchewan and Manitoba in 2018 resulted in trimming VIA's flagship from three to two weekly round trips east of Jasper, Alberta. A summer-only third round trip between Jasper and Vancouver operated prior to the COVID-19 pandemic, but did not resume in 2022. Elsewhere, CN and CP have implicit veto power if VIA wants to add frequencies.

The passenger operator has the ability to challenge host-railroad dispatching practices with the Canadian Transportation Agency. However, VIA management has never chosen to address a timekeeping or access issue with CN, which hosts about 85% of VIA's service. In contrast, farmers succeeded in forcing federal regulations that impose fines if railroads fail to deliver enough railcars to satisfy their shipping needs. In effect, that gives grain hoppers priority over passengers, at least as far as the government and railroads are concerned.

How much VIA pays the hosts, as well as details of each party's operating obligations, remain shrouded in secrecy. When *Trains* asked whether a 10-year service agreement from 2007 has been renegotiated, or if annual escalator payment formulas have been revised, VIA only acknowledged it is "currently renegotiating access terms with Canadian National and continues to have access to CN's network while such negotiations are ongoing."

• **DECLINING RELEVANCE.** The debilitating effect of slow schedules and constricted access has forced VIA into a business plan that attempts to provide the best onboard experience possible (accompanied with high prices to pay for it). This is the trade-off for its inability to furnish more trains on corridors or daily mobility for residents along its long-distance routes.

VIA has developed a consistently stellar reputation through the years for passenger-friendly customer service; it's among the few variables over which the company has total control. That has been a distinct plus for leisure and business travelers, but does nothing to reverse the perception of many Canadians that the enterprise is in-

Prestige class bedrooms feature a full-size double bed, as well as large windows such as this one offering a view of a frozen Ontario lake on the car's first revenue run on Nov. 19, 2014.

VIA'S LEGACY PASSENGER CARS

Class	Type	Builder	Years	Active
HEP-1	Coach-Economy	Budd	1954-55	27
HEP-1	Coach-Economy	Various	1946-47	16
HEP-2	Coach-Economy	Various	1947-53	23
HEP-2	Business-galley	Various	1947-49	10
LRC	Coach-Economy	Bombardier	1981-84	71
LRC	Coach-Business	Bombardier	1984	26
REN	Coach-Economy	Metropolitan-Cammell	1995-96	33
REN	Coach-Business	Metropolitan-Cammell	1995-96	14
HEP-1	Sleeper-Chateau	Budd	1954-55	21
HEP-1	Sleeper-Chateau (P)	Budd**	1954-55	8
HEP-1	Sleeper/Manor	Budd	1954-55	40
REN	Sleeper	Metropolitan-Cammell	1995-96	27
HEP-1	Dome-lounge-sleeper/Park	Budd	1954-55	10
HEP-1	Dome-lounge-sleeper/Park (P)	Budd**	1954-55	4
HEP-1	Dining	Budd	1954-55	13
REN	Dining	Metropolitan-Cammell*	1995-96	3
HEP-1	Dome-lounge/Skyline	Budd	1954-55	16
REN	Lounge-service	Metropolitan-Cammell*	1996-97	20
	Panorama dome	Colorado Railcar	2000	3
	Lounge	CC&F	1954	1
Total				**386**

Excludes Rail Diesel, baggage, and Pukatawagan service equipment. **Source:** VIA Rail Canada. (P) Prestige Class. *Bombardier converted Renaissance dining cars from sleeper shells. **Avalon Rail structurally reconfigured for Prestige service in 2012.

VIA ROUTES AND EQUIPMENT

Service	End points	Round trips	Frequency	Required sets
Corridor	Quebec City-Montreal	4	Daily	Pooled among all departures: 2 Renaissance 6 HEP 16 LRC*
	Montreal-Toronto (direct)	6	Daily	
	Montreal-Ottawa	6	Daily	
	Ottawa-Toronto	8	Daily	
	Toronto-Windsor, Ont.	4	Daily	
	Toronto-Sarnia, Ont.	1	Daily	
Long-haul *Ocean*	Montreal-Halifax, Nova Scotia	3	Weekly	2 (combined) HEP-Renaissance
Long-haul *Canadian*	Toronto-Vancouver, B.C.	2	Weekly	3 HEP
Mandatory	Montreal-Jonquiere, Que.	3	Weekly	1 HEP
	Montreal-Senneterre, Que.	3	Weekly	1 HEP
	Sudbury-White River, Ont.	3	Weekly	1 RDC
	Winnipeg-The Pas, Man.	2	Weekly	2 HEP**
	The Pas-Churchill, Man.	3	Weekly	2 HEP**
	The Pas-Pukatawagan, Man	2	Weekly	Legacy CN cars
	Jasper,Alta.,-Prince George-Prince Rupert B.C.	3	Weekly	2 HEP

*May also include HEP cars. **Same equipment used for both services.

An unoccupied sleeping car trails the Park-class dome-lounge-observation as the westbound *Canadian* approachs Kamloops, B.C., on Oct. 22, 2022. Russ Grycan

Containers for fish to be shipped to Winnipeg are unloaded from a train bound for Churchill, Manitoba, in 2016. This remote service was largely maintained during the pandemic.

consequential because it doesn't offer enough routes or frequencies.

Predictably, this entrenched invisibility served VIA poorly when adversity hit in 2020. Route shutdowns in February, triggered by First Nations pipeline protests that resulted in widespread rail line blockades, had VIA on the ropes before province-specific COVID-19 travel restrictions delivered a knockout blow.

Only the remote trains between Winnipeg and Churchill, Manitoba, where rural residents lack other transportation options, continued to operate during the pandemic at previous triweekly frequencies. Toronto-Ottawa-Montreal service initially dropped to once daily in each direction; the *Canadian* and Montreal-Halifax *Ocean* didn't resume with a single weekly round trip until the end of that year. Other remote routes, where VIA receives so-called "mandatory" funding in British Columbia, Ontario, and Quebec, eventually returned with only a once-weekly passage until full triweekly restoration occurred in mid-2022. Many corridor frequencies also came back by then, but several pre-pandemic round trips in Southwest Ontario and east of Toronto have not been restored.

A NEW BEGINNING

Can deployment of the spiffy Siemens trainsets make a difference? Landry is counting on a payoff from the extra effort VIA's engineering and marketing staffs

have placed into their design, as well as an exhaustive testing program.

Only after the procurement process selected Siemens did customization begin, starting with accessibility. VIA constructed a wooden mockup at its maintenance facility near Toronto where seat spacing and restroom design could be tested before final decisions were locked in. This was especially important because Canada does not have rail-specific disability regulations. Designers paid particular attention to wheelchair turning circles.

"People came to the mock-up with their mobility aids, we made adjustments, then they came back," Landry explains. The group toured a completed trainset in late August to discover whether any additional changes were needed.

Seating comfort was also a significant focus; different degrees of seat firmness were tested by people of different heights and weights before a final selection was made. Landry says, "On a flat seat you sit 'on' the seat. Give it a slight angle backwards and you sit 'in' the seat; the spine is supported when the seat tilts backwards. That was our 'gotcha' moment." All seats have individual armrests, even in economy class, and seats in both classes are 27 inches wide — wider than seats in the current LRCs — with adjustable headrests. Business-class seats are spaced at 38 inches and have a "privacy shield" barrier that prevents a passenger from reading what is on another person's laptop. Economy class seat spacing is 36 inches with narrower armrests.

"All of the interior amenities are very much unique to us: the finish, configuration, even the size of the coffee pot," Landry jests when asked about comparisons to similar Siemens trainsets for Brightline or Amtrak's Midwest and California services. He declines to speculate why deployment of U.S. state-sponsored equipment has stumbled, but acknowledges how difficult it had been to sign off on all the details and make adjustments before production could continue in the middle of the pandemic.

Landry's biggest concern: how would everything withstand a Canadian winter? "A train might leave Windsor in the rain," he says. "By Toronto, it's freezing rain; Kingston, you see the first flakes; Montreal, you're getting good amounts; and by Quebec, it's a snowstorm. And it could be wet or dry snow. That's one reason why we've had such a long testing program — the first trainset arrived a year ago — but it's a lot easier to debug something on one than 32."

Ron Bartels, VIA's assistant director of engineering who also accompanies *Trains* on the tour, explains an important production change. "Compared to what you might have seen south of the border, our emergency windows are polycarbonate, not glass. At 75 pounds, we found one person handling it was too much," Bartels says, adding, "You don't have a lot of room to maneuver, so cutting the weight in half makes all the difference. The whole process of ripping the gasket hasn't changed, but once the window falls toward you, it's half the weight of a glass window."

To work out accessibility details for the new equipment, VIA built this wooden mockup of a car interior at its Toronto facility, allowing for seat-spacing adjustments.

Armrests for each seat in the Siemens coaches are a feature in both business class, shown here, and economy.

Ron Bartels, VIA's assistant director of engineering, in the cab car; locomotive remote controls are at left, coach functions at right.

VIA's cab car demanded special attention because it's a new design that is also being used for California's trainsets and Amtrak's coming Airo fleet. Controls replicate those in a Charger's cab; locomotive functions are displayed on one side of the passageway behind the engineers' compartment, with onboard comfort monitoring controls located opposite. The "brain" for those HVAC, lighting, passenger information display, and other electrical systems is located behind a similar panel in car 1A next to the cab car. Because interior configuration drives seat counts, VIA decided on different layouts within each of the 32 semi-permanently coupled five-car trainsets.

The line-up (which does not include a car 2) looks like this:

CAB — Economy non-accessible
1A — Economy accessible/4 mobility seats and mobility aid spaces
1B — Economy non-accessible
3B — Business non-accessible/galley
3A — Business accessible/4 mobility seats
LOCOMOTIVE

Landry says the decision to offer two business-class cars was commercially driven: "When we started to grow the business in 2016, we were constantly selling out business class and they currently have limited accessibility."

He hastens to add, "This is what we are starting with; the reality is that we can reconfigure each car, and we will be playing with train lengths." As part of its customer testing program, VIA had already operated full on-board service runs during the sum-

MORE WITH LESS: VIA 2010-2019
Average annual receipts and expenses (C$ millions)

	2010-2013	2015-2019	Percentage change
Government			
Operating	$277.2	$273.0	-2%
Asset renewal	$11.5	$4.0	-65%
VIA Passenger Revenue	$257.0	$335.0	30%
Operating expense	$553.3	$631.4	14%

A cab car for one of the VIA Venture trainsets is inspected during testing at the Montreal Maintenance Centre. The first cab cars built for Venture equipment, they will be followed by structurally similar U.S. versions for San Joaquin Venture and Amtrak's Airo trainsets.

A closer look at the locomotive control panel in the cab car. The basic design for the Canadian equipment will also be used for Siemens trainsets in the United States.

An effort to make the galley and serving area visually appealing was important, as passengers will see it as they enter the business class car, says VIA President Martin Landry.

mer and fall of 2022 with employees playing the passenger role. It introduced the first trainset in November, unannounced, on a regularly scheduled run.

"The galley was designed with input from employees: where to put the ovens, refrigeration, the height and positioning of the prep table, and the like," Landry says. "It's their office, so they need to see what actually works." He says the units have more capabilities than VIA's current trains, where business-class meals are served at seats and economy passengers make food and beverage purchases from carts.

He fully expects further changes once passengers experience the trainsets and provide feedback.

"Customers are going to use them in ways engineers didn't think about," Landry says. A promoted launch is to follow, and deliveries of the new equipment will continue through 2025.

CLOUDY FUTURE

VIA successfully made the case to invest in the new trainsets under former President Yves Desjardins-Siciliano [see "Reflecting on VIA Rail Canada at 40," November 2018], who interestingly left to become CEO of Siemens Mobility in Canada. His VIA successor, Cynthia Garneau, resigned after Canadian Transport Minister Omar Alghabra announced in March 2022

A corridor trainset, with LRC coaches and a single HEP-2 stainless steel car on the rear, leans into a curve near Newcastle, Ontario, on Sept. 13, 2022. Such mix-and-match consists will be replaced by the new Venture equipment.

that his agency would pursue private-sector investment in Desjardins-Siciliano's so-called "High Frequency Rail" plan, rather than allowing VIA to control the project.

Though High Frequency Rail is characterized as "private," Canadian transportation analyst Greg Gormick has totaled a public investment (including a 2021 budgetary earmark) since 2016 of C$974 million (U.S. $723 million).

The HFR idea is to run VIA's new trainsets on a separate right-of-way through rural Ontario, rather than expand Canadian National infrastructure between Montreal and Toronto to sufficiently accommodate both freight and passenger trains. The existing route — serving population centers like Oshawa, Kingston, Belleville, Brockville, and Cornwall — received substantial capacity upgrades beginning in 2010 without any requirement for CN to improve VIA on-time performance.

Transport Canada revealed in a "Request for Expressions of Interest Update" on Oct. 31, 2022, that "54 Interested Parties [provided] written responses confirming a desire to participate in the HFR project." The agency had begun studying VIA's proposal in 2016 but never issued a report outlining its perceived viability.

Similarly, there is no way to evaluate exactly what the "expressions of interest" entail until responses from a "Request for Qualifications" to launch in January 2023 are published. One conclusion is clear: VIA is now completely shut out of the process. "HFR will operate at arm's length from VIA rail," a Transport Canada spokeswoman tells *Trains*, adding, "HFR will become a project authority and work collaboratively with the chosen private partner to design and develop the project," despite Transport Canada's designation of the separate entity managing the project as a "VIA subsidiary."

There are numerous unknowns the new authority will be expected to address, including where electrification is feasible, given that some right-of-way will need to be built within existing host railroad corridors.

For example, there is no easy way for the HFR route to reach Montreal's Central Station. The under-construction Réseau express métropolitain light rail system — a project driven by Quebec's main pension fund, rather than transportation officials — has usurped previous CN right-of-way, both west toward Toronto and through the Mount Royal Tunnel, which would have provided a direct route east to Quebec City.

This abandoned CP right-of-way west of Glen Tay, Ontario, is now a trail for hikers and snowmobilers. The HFR plan calls for its transformation into a 110-mph railroad.

And the concept will require extensive rebuilding of the route between Toronto and Ottawa. Canadian Pacific abandoned or severely downgrade almost 200 miles of

In Montreal, right-of-way that might have been used for the High Frequency Rail project has been claimed by the REM light rail construction, which also took over the Mount Royal Tunnel.

its original Montreal-Toronto route through Smiths Falls and Peterborough decades ago; 107 miles between Glen Tay and Havelock, Ontario, are now a recreational trail used for hiking and snowmobiling. The remaining trackage will have to be completely rehabilitated.

Transport Canada says yet-unspecified billions of dollars of "construction funding and financing would include a mix of government payments, private debt, and equity financing (that) would equate to a significant level of eligible capital costs" — in short, the kind of massive investment the government has never made in VIA.

WHAT VIA CAN DO NOW

Transport Canada's time frame to turn "expressions of interest" into HFR reality is more than a decade, according to its website, hfr-tgf.ca. VIA's management serves at the pleasure of the agency's head, Alghabra, with funding and policies set by the Trudeau government.

But even as HFR creeps along, Landry and his team have the means to strengthen VIA's network if allowed to pursue key initiatives. These include:.

• SEEKING RAPPROCHEMENT WITH CN. Without fanfare, Canadian National's handling of Windsor-Quebec City corridor trains, and especially the *Canadian,* improved under CN Executive Vice President and Chief Operating Officer Rob Reilly, according to Gormick. (Reilly departed in November 2022 as CN CEO Tracy Robinson put together her own leadership team.)

"With CN now only running trains west of Winnipeg that fit into the lengthened passing tracks, the *Canadian*'s reliability has significantly improved, as has timekeeping on the corridor," Gormick says. VIA could utilize more slots if CN made them available, and this might be possible in spite of the premise of continued CN intransigence that prompted VIA to suggest HFR in the first place.

• PURSUING A SOUTHWEST ONTARIO FIX. Transport Canada contends expert external advisors must be hired to write a report due at the end of 2023 proposing how service west of Toronto to Sarnia and Windsor might be improved. Nonsense. VIA, CN, and GO Transit parent Metrolinx, which dispatches much of the Toronto trackage, have the wherewithal to figure out capacity

RIDERSHIP TRENDS BY ROUTE (IN THOUSANDS)

	2013	2019	Percentage change
Corridor			
Toronto East	2,627.8	3,634.0	38%
SW Ontario/Niagara	997.1	1,148.5	15%
Long haul			
Ocean	76.3	78.4	3%
Canadian*	99.1	82.1	-25%
Remote ("Mandatory")			
Montreal-Jonquiere/Senneterre	23.2	21.4	-8%
Sudbury-White River	5.2	5.9	13%
Winnipeg-Churchill**	27.2	21.1	-22%
Jasper-Prince-Rupert	18.6	16.3	-12%

*Canadian east of Jasper reduced by one round-trip in 2018. **Service to Churchill suspended due to washouts 2017-18. Partial Gaspé-Montreal service in 2013 omitted; through trains to Gaspé have not run since 2011.

Two F40PH-2D locomotives lead the Halifax-bound *Ocean* north of Shubenacadie, Nova Scotia, on Sept. 10, 2022. The Renaissance cars shown are paired with stainless steel equipment (out of the picture) because the train can no longer be turned at Halifax. The *Park* observation car has been dropped.

improvements on their own instead of having the government hire more consultants. These might include more crossovers or station platforms. Canadian National and VIA already benefit from a double-track project east of Vancouver funded for CN by Canada's National Trade Corridors fund. Since freight, intercity passenger, and commuter trains are involved, it's possible the parties can tap public funds to the benefit of all that would wind up creating more slots for VIA. Right now, VIA's Southwest Ontario offerings are a poor stepchild to service east of Toronto, and the company should relish the opportunity to show it can change that.

• EXPERIMENTING WITH PRICING STRATEGY. Currently, though there are some off-season price breaks, VIA long-distance train fares remain high when travel demand diminishes. Consists are reduced and onboard service employees furloughed in the process so VIA can live within its budget.

But perhaps a different approach might be in order where pricing can be reduced as a promotional tool.

In the 1960s, prior to computer-controlled yield management, Canadian National instituted "Red, White, and Blue" fares that varied by season and days of the week. Maybe it's time to try a similar concept as a means of reacquainting the traveling public with rail travel, rather than relying on the all-too-predictable "Discount Tuesdays" limited price reductions. The idea would work with Siemens trainset introductions on the corridor, as well. Landry tells *Trains* VIA's booking website is being redesigned; hopefully it will be flexible enough to support "get acquainted" promotions.

With its measured approach to restoring service after the devastating pandemic, VIA has nevertheless succeeded in restoring revenue and ridership growth. Unlike Amtrak's capacity constrictions caused by questionable personnel and equipment maintenance policies, VIA's *Canadian* and *Ocean* consistently sold out large consists throughout much of 2022 and are on track to have a good year in 2023, as long as aging rolling stock doesn't succumb to more misfortune. Keeping those services strong is essential if VIA is to successfully make the case for exploring the purchase of new passenger cars for those routes.

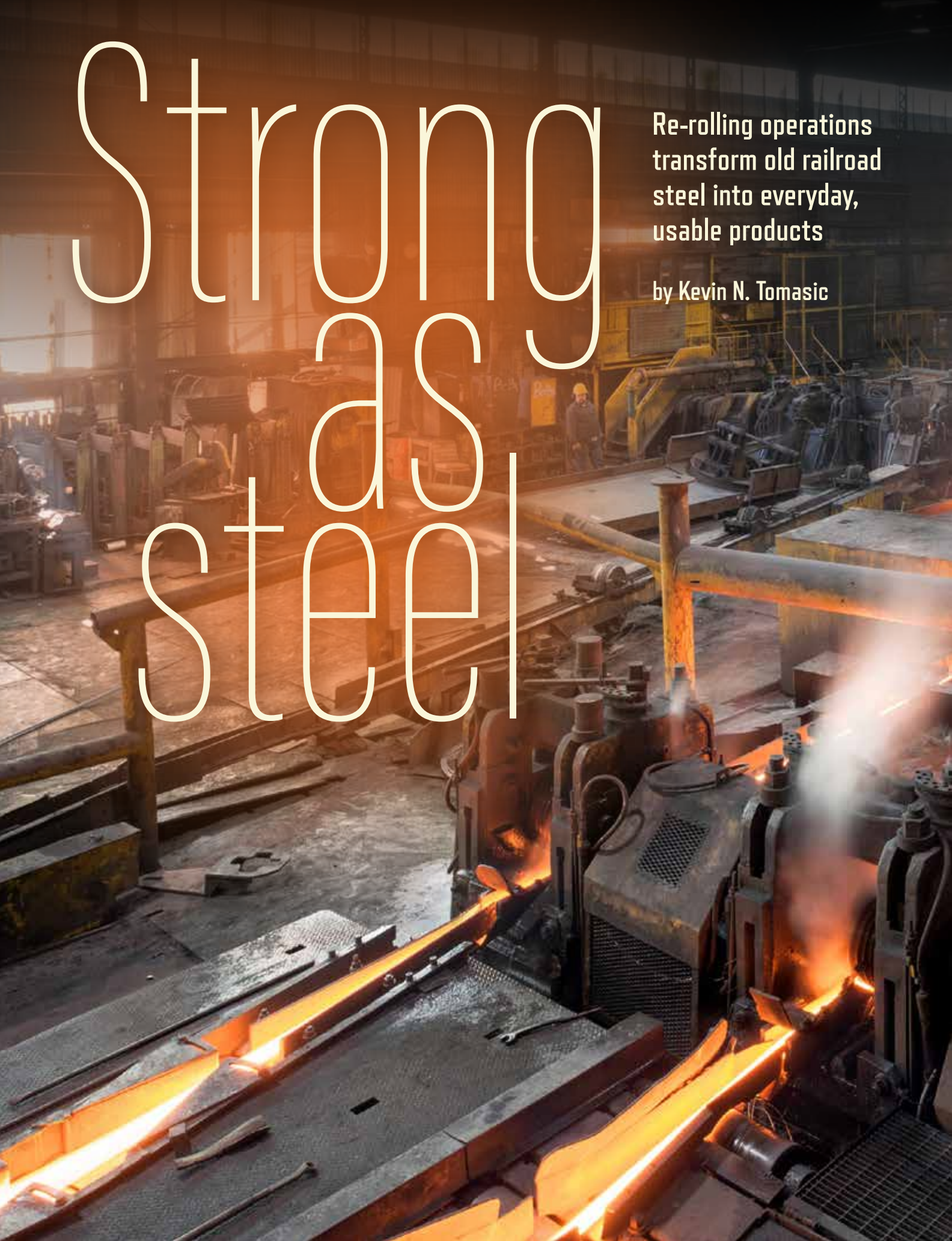
VIA's Windsor, Ontario, station is actually several miles north of downtown at Walkerville. The stub-end facility has no direct access to the CP tunnel under the Detroit River.

The biggest opportunity for expanded influence, however, is on the Windsor-Quebec corridor. Coupled with innovative promotion and pricing, VIA now has the product, embodied in the new Siemens fleet, to begin turning heads in a meaningful way. HFR is more than a decade away — if it happens at all. So travelers can only hope Transport Canada and politicians responsible for annual funding will give management the tools to build on the creativity and enthusiasm for growing its business that VIA has always shown. I

Strong as steel

Re-rolling operations transform old railroad steel into everyday, usable products

by Kevin N. Tomasic



This overall view of the mill shows the separate rail pieces moving through the mill stands. In the background are cooling beds and shears where the finished products are cut to length and bundled for shipment.
Viktor Macha

Steel is an interesting material; it can be recycled repeatedly. After its useful life is over, it's gathered up, shredded (e.g., in the case of old automobiles) or chopped into required sizes for melting in a furnace — either electric arc or basic oxygen — and then transformed into a new steel product.

But there is another path for old steel called the re-roller. Re-rolling is the practice of taking an old piece of steel, putting it in a reheat furnace, then converting it into a new product. The metal is not melted, it's just brought up to a temperature that doesn't change its metallurgy and formed into a new shape.

At the discharge end of the furnace, water drips onto the peel bar as it awaits the command to push another rail out of the 2200-degree furnace and into the descaler before rolling. The peel bar repeats this action every 30 seconds. Four photos, Kevin N. Tomasic

There are a few re-rolling operations in the U.S. In Cincinnati, Ohio, there is one that rolls old freight car axles into reinforcing bar, and another plant in Cleveland that rolls axles into various railroad track components. Pennsylvania is home to two mills that roll railroad rails into new items. Old railroad rails and axles are ideal for this because they're made of very strong high carbon steel. The steel used in this application has been stringently tested to the Association of American Railroads' standards and is abundant.

Franklin Industries, located in the town of Franklin in northwestern Pennsylvania's Venango County, is a rail re-rolling mill. As the county seat, this town is nestled into the Allegheny Mountain range, and is home to approximately 7,200 people. It's bisected by French Creek and is near Oil City. In 1859, the first commercial oil discovery in the U.S. was made in Oil City.

In 1901, Franklin Industries was known as Franklin Rolling Mill & Foundry Co. Subsequent management changes led to its acquisition by the Kovalchick family of Indiana, Pa., in 2002. The family owns a di-

An overall view taken from the rolling mill pulpit shows sunlight streaming down onto the cooling beds. There are three separate cooling beds, one for each mill. After the product cools, it's cut to various lengths, sent for painting or galvanizing, then shipped across the U.S.

Rails are lined up on the charging table before being pushed into furnace one by one. Each rail is pushed to the same position to be picked up by the walking beam furnace — the spacing is important for proper reheating, so they can be pushed out of the furnace and into the rolling mill.

verse group of businesses, including steel mills, scrap and railroad product recycling, and real estate investment.

For years they have specialized in removing old rail lines. Serious rail enthusiasts might recognize the name Nick Kovalchick, since he bought and saved the beloved East Broad Top narrow-gauge line in 1956. He started running excursion trains on it in 1960, probably saving the EBT's rail from going into the Franklin plant for conversion. In February 2020, the Kovalchick family sold the East Broad Top Railroad to a nonprofit foundation and left railroading. Today, Nathan Kovalchick, Nick's grandson, runs the Franklin plant, along with other related company operations.

The mill is fed from a "rail yard" in back and is not what you'd expect. It's a big yard filled with reclaimed, worn-out rail weighing anywhere from 90 pounds up to 155 pounds per yard. The mill has kept up with the increasing size of rail being removed from U.S. rail lines, as much of the lighter rail supply simply went away as branch

At the first mill stand, the rail is split into head, web, and flange — two go straight into mill as the other twists and turns towards third mill. This occurs under the supervision of a maintenance technician. If a problem happens, he can quickly start repairs as he calls for help.

The rolling mill crew leaving the plant at the end of their 10-hour shift. The train crew was moving slowly and stopped short to let them pass. Viktor Macha

SERVED BY A SHORT LINE

ANOTHER INTERESTING FACT about the Franklin plant is that it's served by an Alco-powered short line — the Western New York & Pennsylvania Railroad. The WNY&P serves the plant on a branch stretching from Meadville, Pa., to Rouseville, Pa., an old Erie Lackawanna branch resurrected after near abandonment by Norfolk Southern. The railroad brings in cars of rail and takes out scrap left over after rolling. This scrap likely ends up in an electric arc furnace at a mini mill. At present, service is Monday, Wednesday, and Friday, handled by a crew out of Meadville. The crew normally shows up in the late morning and during the afternoon if they work over to fellow Alco-powered short line Oil Creek & Titusville Railroad in Rouseville. Power is usually one of WNY&P's four-axle Century 424s or 425s. On the day we were there, it was No. 427, an old Massachusetts Central (originally SP&S) unit, smoking away. It was fun to see the WNY&P crew as they were heading back home, stopping for the mill workers after their shift. A nice gesture for sure.

Rail is stored behind the plant — mostly in 39-foot lengths that are broken to 14-foot lengths for rolling. Four photos, Kevin N. Tomasic

lines were abandoned. The rail comes in via truck or railcar, is sorted and finally "nicked" and broken, not cut, into 10-to-14-foot lengths. It's then rolled into the building and positioned in front of a walking beam reheat furnace built by Salem Furnace Co. of Carnegie, Pa.

As the rail is "walked" through the furnace, it's heated to 2,200 degrees Fahrenheit. Crews roll around 1,000 pieces of rail in an 8-to-10-hour shift. Once the rail is heated up to temperature, it's conveyed out of the furnace through a descaler that uses high pressure water jets to remove impurities generated during the process. It then goes to a mill stand that cuts it into three pieces: the head, the web, and the flange.

This storage area (behind the plant) is where rail is gathered, sized, and then fed into the building to be set on the charge table. Notice the furnace stack in the background.

An Alco-powered Western New York & Pennsylvania Railroad train, from Meadville, Pa., is led by C425 No. 427. It comes past the plant and heads for interchange with the Oil Creek & Titusville Railroad in Rouseville, Pa. The crew will work the Franklin plant on their way back to Meadville.

At this first stand, all the workers are wearing radio headsets. This is unusual in a mill. Don Smith, mill manager, explains that this is because of how spread out everything in the plant is. The radios allow workers to keep in touch with each other no matter their locations. The headsets also keep their hands free to work on the equipment while protecting their hearing.

Once the rail is split, the magic begins. All three pieces of red-hot steel are rolled simultaneously side by side in three 12-inch mills. It's quite a sight to see the glowing worms threading around multiple mill stands as they chase each other through the steam. You must watch a few go through before you fully understand the operation.

After rolling, the finished product ends up on three long cooling beds before heading to the saws for cutting to final length. Once cut, the finished goods are either painted or hot-dip galvanized before being sent to market. The plant even has a little outlet store where you can buy small lots of Franklin's product. This is unique in the industry. It's not unusual to see a farmer pull up with a trailer behind his Ford F-150 and buy a few hundred fence posts for his farm.

The products made at this plant are seen just about everywhere in the U.S. Most of the triangular and flanged channel posts you see holding up small highway or utility signs are Franklin posts.

For you wine drinkers, you might be interested to know that Franklin supplies a good portion of the grape stakes in the country used to hold up grapevines in conjunction with galvanized steel wire. Another of their big markets is fence posts, available in farm supply stores nationwide.

Business is good here. Smith and Kovalchick are happy with the workforce. The Kovalchick Corp. has made big investments in the rolling mill, the furnace, and in their employees. They look forward to business continuing for many years, as do the people of Franklin.

So the next time you take a closer look at a road sign hanging from a channel post or notice a horse (or a cow) nuzzling up to a fence held up by a T-post, just realize both of those supports were once railroad rail. In this day of adaptive reuse, this is a shining example. A new life for old rail.

A long T-post is being torch-cut, as an excess-length post won't fit across the cooling bed and will damage machinery.

Historic NYC locomotives move toward safety

Other pieces in path of construction on Beacon Island site are scrapped

▲ **Sitting on timber mats at the Beacon Island site, outside Albany, N.Y., former New York Central T-3a No. 278 (left) and S-1 No. 6000 are safe for now. Once an access road is completed they will be loaded on semitrailers and moved to Danbury, Conn., where restoration can begin. No. 6000, the S-1, is the only remaining example of the class.** Two photos, David Pickett

For the 200-foot move to safety, Hulcher Services lifted the T-3a locomotive using four sideboom cranes, two at each end.

TWO HISTORIC New York Central electric locomotives stranded near Albany, N.Y., — one, the world's first mainline electric — have been moved 200 feet to a temporary storage area, but remain on the Beacon Island development location.

This initial move was required as major work began on the site. The locomotives, owned by the Danbury (Conn.) Railway Museum, were located within the footprint of initial construction [see "Museum works to save two rare NYC electric locomotives," "Preservation," June 2022].

"This is a critical step in the final phase of saving and restoring these engines," says Stan Madyda, project manager.

A key project facilitator was Henry Posner III, of Railroad Development Corp., who has been a strong advocate for saving S-1 No. 6000 and T-3a No. 278. He provided significant resources and assistance for the relocation and continues to play a major role by making connections with strategic partners for logistics and funding.

The Beacon Island site is being converted into a manufacturing facility for offshore wind turbines. Work on the land, owned by the Port of Albany, was held up for months due to environmental and permit issues that have recently been resolved. Getting recovery equipment to the locomotives was complicated by soft soils across the site, as well as a steep and height-limited access road running under the CSX Port Subdivision.

Although the locomotives were within 600 feet of a CSX line and a siding, the rails were cut years ago by environmental work on one end and a bridge collapse on the other. Additional complications included overhead power lines and an underground high-pressure gas line located within feet of the S-1. These factors, combined with the locomotives' weight, have made it difficult to lift them or move them by truck.

To execute the move, Hulcher Services, Inc., was engaged to lift each locomotive using four sidebooms. Although initially planned to be a two-day operation, the move was completed in a single long day to avoid blocking traffic on the adjacent construction road. The locomotives were each picked up as single units and first carried northwest and then southeast, moving them away from the new building plot and path for the new entrance road.

They were placed onto timber mats and will remain there until construction of the access road and additional site work is completed in early 2023. The locomotives will then be picked up and loaded onto semitrailers for transport from the site.

"We appreciate Hulcher working with us to move these very old and heavy engines across difficult terrain," says Madyda, in regards to the moving operations.

Once the locomotives are off the Beacon Island site restoration work can begin. Information on the locomotives and the Danbury museum's plans for them, as well as how to donate to the project, can be found at www.danburyrail.org/electrics.

The other rail equipment on the site had been scrapped. This included two museum-owned locomotives (a NYC Alco RS3 and GE U25B), and four Port of Albany-owned railcars, two of which were Delaware & Hudson dining cars. The pieces were in poor condition, which presented significant challenges to moving them.

While interest was expressed in saving them, no funding emerged in time. All of the rail pieces had suffered damage due to weather and vandalism. The rails have been removed from the site and the roadbed is now being used as primary access for construction. — *David Pickett*

‘Spirit of Alberta’ reconstruction moves on to firebox work

Ex-CN locomotive was a 1970s excursion star

An employee from D.F. Boiler Tube Industries works in the firebox of No. 6060, welding a plug in a test hole. D.F. Boiler is also working on staybolt replacements for the locomotive. Don Totten

THE ROCKY MOUNTAIN RAIL SOCIETY continues to make progress on the operational restoration of former Canadian National 4-8-2 No. 6060. The locomotive is one of 20 Mountain-type, U1f locomotives built by Montreal Locomotive Works in 1944. The design incorporated a conical smokebox front, earning the name “Bullet-Nosed Betty.” The class was used in passenger and freight services across Canada until retired in 1959. CN rebuilt No. 6060 in the 1970s and put the locomotive to work powering scheduled steam excursions from Toronto to Niagara Falls. There were several other trips made in Quebec and Ontario [see “They were nice white pants,” “In my own words,” September 2022].

In 1980, CN donated the locomotive to the Province of Alberta to celebrate its 75th anniversary. No. 6060 continued to operate in Western Canada, including a visit to Expo 86 in Vancouver, British Columbia. The locomotive later went to the Alberta Railway Museum in Stettler for storage. The RMRS, in 1998, ran excursions with No. 6060 between Stettler and Big Valley. The Province of Alberta sold No. 6060 to the RMRS in 1992; after which the society operated it until 2012, when maintenance issues sidelined the locomotive.

With No. 6060 parked, the RMRS began a fundraising drive to support a complete restoration. Private donations, casinos, and government grants helped the nonprofit begin its rebuilding journey.

In June 2020, on a budget of C$50,000 (U.S. $36,770) Edmonton-based D.F. Boiler Tube Industries came to Warden, (just outside of Stettler) to remove 79 staybolts identified as requiring replacement. Staybolts are mechanical supports used in the firebox, acting like a bridge to support firebox walls under steam pressure. The D.F. Boiler crew completed the removal within the five days allotted.

As this happened, the RMRS continued to pursue additional project funding. No. 6060 is a provincial historic resource, and therefore eligible for government grants, one of which was given to the society in June 2022 by Alberta’s Ministry of Culture. This $82,000 grant brought D.F. Boiler back to Warden for firebox repairs in September 2022.

The three key issues to be addressed were as follows:

1 The firebox required preparation to accept welding of a steel patch in the crown sheet — located at the top of the firebox.

2 The steel patch had to be cut, shaped, and installed.

3 Work was required on the firebox floor to repair deck plating where the firebrick is placed.

In the same visit these two minor tasks were completed:

- Additional steel was added to the sides of the thermic syphons, building up worn areas. Thermic syphons increase firebox surface area allowing greater heat transfer from fire to boiler to boil water.
- Welded plugs were used to repair the throat sheet inspection holes. The throat sheet is the lower front of the firebox.

The next step is the manufacture of rigid and flexible staybolts to replace those removed in 2020. This requires alignment, drilling, and thread tapping holes in the new crown sheet. New bolts will be threaded from outside the boiler into the firebox’s steel sheets, and seal-welded. Each staybolt is expected to cost nearly C$500 (U.S. $368). These next steps are complex and critical in returning No. 6060 to service.

Restoring and operating No. 6060 is a key organizational goal for the RMRS. The locomotive is a symbol of Canadian achievement. One RMRS member, Les Dickins, summed up the sentiment for the project in a television interview: “I’ve seen the 6060 run. I really want to see her run again!”

For more project information or to learn about support opportunities, visit 6060.org. — *Jason Paul Sailer*

Canadian National No. 6060 leads a westbound excursion over the Rideau Canal at Kingston Mills, Ontario, at milepost 169.5 of CN’s Kingston Subdivision in 1977. Sam McLauchlan

MARTA car No. 509 travels a freeway during its move to the Southeastern Railway Museum in Duluth, Ga. Two photos, Southeastern Railway Museum

First-generation MARTA car donated to museum

Car donation comes as original fleet is retired following over 40 years of service

THE METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY has donated a railcar from the Authority's original fleet to the Southeastern Railway Museum in Duluth, Ga. The donation of the 42-year-old railcar is one of several activities planned as MARTA transitions to its new railcar fleet.

Railcar No. 509, built by Société Franco-Belge, began service in 1981 along with 20 other identical cars and was retired at the end of its useful life 30 years later. It has a 75-foot-long aluminum body, weighs 81,000 pounds, can seat 46 passengers, and has operator cabs at both ends. The car was transported from MARTA's Avondale Yard to the museum on Nov. 16, 2022.

Construction of MARTA's heavy rail system began in 1975, with the first railcars rolling out in 1979. The existing heavy rail fleet totals 340 cars and was obtained under three procurements between 1979 and 2005. MARTA will replace its entire heavy rail fleet over the next several years with 224 railcars (56 four-car train sets) purchased from Stadler in 2019 for $646 million; the single largest procurement for either organization. The new cars will begin arriving this year with deliveries continuing through 2028.

"With our future railcar fleet now in final design, it's time we start clearing track space to make room for our new trains," says MARTA General Manager and CEO Collie Greenwood. "We're beginning to retire our oldest railcars and we want to ensure that one of them is around for future generations to see. At the Southeastern Railway Museum, it will join [the] historic fleet of MARTA buses … ."

Once at the museum, No. 509 is rolled off the trailer. It will take its place with a fleet of historic MARTA buses to help illustrate transportation in and around Atlanta.

"I got here in 1998 and this is what I trained on to become a mechanic, so it's got a little nostalgia going," says Pierre Merrick, MARTA journeyman railcar mechanic. "I'm not going to shed a tear, but this is an end of an era. We are getting ready to start a new chapter with the new cars, so everybody can see the transition from old to new."

The Southeastern Railway Museum houses over 100 rolling stock items such as Pullman cars, steam locomotives, MARTA buses, and now, an original MARTA railcar.

"As Georgia's official transportation history museum, we're honored to be able to acquire such a significant piece of our region's transportation history. MARTA is a significant economic engine for our region, and we're pleased to continue expanding the collection related to its history and development," said Randy Pirkle, executive director emeritus, Southeastern Railway Museum.

Learn more about the Southeastern Railway at: train-museum.org. — *MARTA*

NAUGATUCK RAILROAD, the operating component of the Railroad Museum of New England at Thomaston, Conn., acquired two GP9s of Norfolk & Western heritage in 2021. Each now wears an N&W-inspired paint scheme and Naugatuck logo: No. 686 is dressed in traditional N&W black, while No. 859, pictured here, carries the 1960s "Pevler Blue." The units serve on both Naugatuck's freight and passenger trains. Scott A. Hartley

WESTERN MARYLAND RAILWAY once owned four Alco FA2s. Today, two remain in private ownership, and one of these is on its way to restoration. No. 303 was recently moved from Maryland to Railway Service Contractors in Kansas City, Kan. The locomotive, built in 1951 for the WM, was sold to GE, along with the road's three other FA2s, in 1972. GE converted them to cab-control power units for the Long Island Rail Road. Plans call for No. 303 to be restored as a cab-control unit. Mike Roberts, the current owner, would like to place the restored unit with a tourist railroad. Randall Volskay

THE FIRST NEW BELPAIRE STEAM-LOCOMOTIVE FIREBOX built in Altoona, Pa., since 1946 has been constructed at the Railroaders Memorial Museum. In December 2022, consultant FMW Solutions and volunteers fabricated a new firebox for former Pennsylvania Railroad K4s 4-6-2 No. 1361, which was built in the Juniata Shops in 1918. No. 1361 is undergoing a $2.6 million operational restoration [see "PRR K4s engine No. 1361 to be restored ... ," "News Wire," Trains.com, June 25, 2021]. Dan Cupper

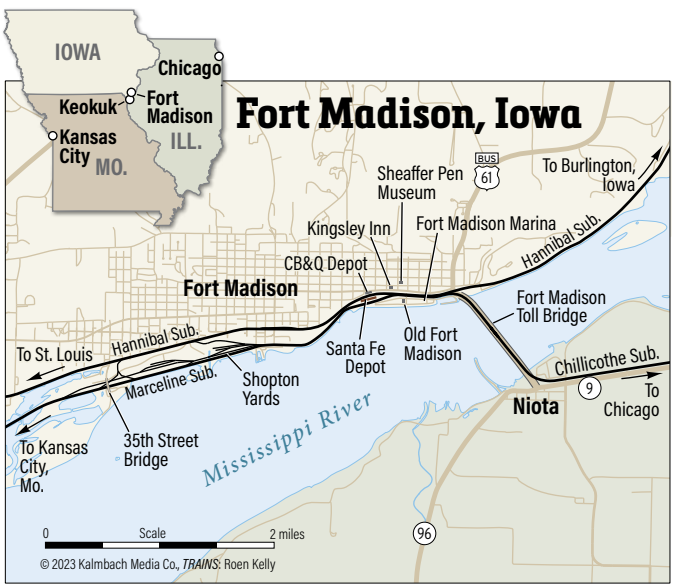
Hot spot: Fort Madison, Iowa

Cross the Mississippi with BNSF on a double-deck swing bridge

▲ **BNSF No. 7165, a GE ES44C4, eases its train past the former Santa Fe depot in Fort Madison. The foot bridge, seen over the train, is a great photo location.**
Three photos, Steve Smedley

AS THE NAME INDICATES, Fort Madison, Iowa, was a military establishment. In 1808 it became the first permanent U.S. military fort on the Upper Mississippi and the site of the only battle in the War of 1812 to take place west of the big river. The city is also home to the famous Sheaffer pen, but we'll get to that later.

Railroading, in the form of the Santa Fe, came to Fort Madison in 1887. There was a bit of civic chicanery involved in bringing the Santa Fe to Fort Madison. The railroad was considering a river crossing at Keokuk, Iowa, just over 20 miles downstream. Upon hearing this news, the citizens of Fort Madison granted 80 acres of land to the Santa Fe and agreed to pay 25% of the expenses involved in putting the right-of-way through Lee County.



LOCATION: Fort Madison is a must-visit location on the former Santa Fe Railway's transcon main line between Chicago and California. The city, founded in 1835, sits on the west bank of the Mississippi River.

The highlight of the area for the visiting railfan is the BNSF-owned-and-operated Fort Madison Toll Bridge, a 3,850-foot-long bridge that links unincorporated Niota, Ill., with Fort Madison. U.S. Coast Guard and railroad rules give river traffic the right-of-way. The bridge opens several times daily for towboat and barge traffic moving up and down the Mississippi River. The BNSF averages 100 trains per day over the bridge that opens close to 2,000 times per year. A $2.00

Running on the lower, railroad portion of the 1927 swing bridge, a Union Pacific stack train crosses the Mississippi River. The bridge's upper deck holds a two-lane toll road.

toll is charged only for eastbound vehicles traveling into Illinois. There is no toll to cross westbound into Iowa.

In 1999 the bridge was added to the National Register of Historic Places. It features the world's largest double-deck, double-track, through-truss, swing span measuring 525 feet. The double-track bridge, completed in 1927, features the two main tracks on its lower level with a two-lane highway on the upper level.

The 229-mile-long Chillicothe Subdivision ends in Fort Madison, where the Marceline Subdivision begins. Fort Madison is a crew change point. Crews swap at the east end of the yards — 1601 20th Street.

The Union Pacific holds trackage rights over the line between Chicago and Kansas City, Mo. Usually, between four and six UP intermodal trains will pass per day.

RADIO FREQUENCIES: Chillicothe Sub 160.650, Marceline Sub 160.560, Hannibal Sub 161.160

TRAIN WATCHING: If you want to see intermodal traffic, most of the freight moves through the city are stack trains. In addition, Amtrak uses the restored Santa Fe depot as a crew change point when the *Southwest Chief* calls. Traffic on the Hannibal Subdivision, a former-Burlington Northern line that parallels the Chillicothe and Marceline subs through town, can average three to six trains in daylight; many of them are unit coal trains running between Burlington, Iowa, and St. Louis.

The old Fort Madison Shopton Yards are used for block swapping between trains.

BEST VIEWING: Several great vantage points are available in Fort Madison. A foot bridge crosses the tracks at the restored former Santa Fe depot, which was built in 1910, at 810 10th Street.

Amtrak's eastbound *Southwest Chief* stops in Fort Madison for passengers and a crew change. Depending on time of year, you can catch both the east-and-westbound *Chiefs* in daylight.

Just to the west of the Santa Fe depot, the North Lee County Historical Society uses the former Chicago, Burlington & Quincy brick station as its home. The museum holds many railroad displays and should be included in your visit.

Both depots have been raised several feet due to Mississippi River flooding. The track structure has been raised over the years as well.

To the east, between the depots and the river, is a reconstruction of the first military post, Old Fort Madison, an active trading post between 1808 and 1813.

The Fort Madison Marina, located just north of Old Fort Madison, has several good spots to photograph trains coming off the bridge.

Another good late-afternoon photo spot is the lightly traveled two-lane, wood-decked 35th Street bridge at the south end of the former Santa Fe yards.

Across the Mississippi River bridge in Niota, Ill., is another good photo location from which to capture eastbound trains coming off the bridge in the morning.

FOR THE FAMILY: The Sheaffer Pen Museum, located at 627 Avenue G, details the history of this world-famous pen that was developed in the back of a Fort Madison jewelry store. Museum admission is free. Harvestville Farm in nearby Donnellson, Iowa is a good family stop, along with the Fox Theatre in downtown Fort Madison. A fantastic place for a visiting railfan to spend an evening is the Kingsley Inn. The inn is located three blocks from the depot. Ask for a room facing the tracks. The Kingsley Inn is also home to the River Rocks Bar & Grill, and is a good place to dine during your train-watching adventure. — *Steve Smedley*

▲ **This is distributed power at work. As these westbound BNSF Railway grain loads run downgrade near Caliente, Calif., on April 5, 2008, 10 units are powering the train — five on the point, a three-engine mid-train DPU set, and a two-engine DPU set at the rear. One locomotive in each DPU set receives the control signals from the front and relays them to the other units in the set. One engineer controls all 10 locomotives.** Scott A. Hartley

Q When multiple units are used as DPUs, must each unit have a DPU antenna?

— Scottie Hicks

A When there is more than one locomotive in a DPU set, one locomotive acts as the receiver and the other(s) respond to MU commands from that locomotive. It's not necessary for these locomotives to be equipped for DPU. *— Greg McDonnell*

Q Back in the 1950s on Missouri Pacific passenger trains, the conductor would pull a metal cord in the vestibule that made a loud hissing noise in order to get the engineer to either stop or start. What was this signaling system and how did it work? *— Bill Chapline, Port Orange, Fla.*

A In the 1950s, the two-way radio was not the reliable tool of today. Train crews needed to find other means to communicate. While hand signals and lanterns were workable within line of sight, other methods of communication were needed to cover different situations. Some passenger trains were equipped with buzzers and intra-train phone systems. The buzzer was just that. The conductor in the passenger car would press a button and a buzzer would sound in the locomotive cab. Just like with the whistle, long and short signals were given in combination calling for specific actions. The intra-train phone system permitted crew conversations throughout the train.

The communicating cord used by the conductor in the vestibule of a passenger train (before the advent of electronic communication cables) was not related to the train brakes. The cord did nothing more than blow an air whistle in the locomotive cab when pulled by a member of the crew. How? There was a second hose that connected passenger cars — the signal line — with the locomotive, using compressed air supplied by the air brake system.

Amtrak's 480-volt equipped cars still have a second hose between cars. Since modern passenger cars are connected electrically, the "buzzer" negates the need for the air whistle. Amtrak uses the second hose — the main reservoir hose — on its equipment to supply high-pressure air through the train to charge the main air reservoirs on each car's brake system, resulting in faster action when applying and releasing the brakes. It also provides air to flush the toilets and operate other auxiliary functions. *— Doug Riddell with Bob Lettenberger*

Q The Chicago Region Environmental and Transportation Efficiency Program, or CREATE, is designed to relieve freight congestion in the Chicago area. Sometimes, especially during heavy winter weather, rail travel slows to a crawl there. Didn't the railroads handle even higher volumes in the 1940s? And, isn't the basic Chicago rail configuration similar to the

Amtrak's westbound *Pere Marquette* passes Metra and Norfolk Southern trains posed for the Englewood Flyover dedication ceremony on Oct. 23, 2014. The flyover is one of more than 70 individual projects that comprise the larger Chicago CREATE program. Bob Johnston

1940s? If they could do it then, why not now? What is different? *— Gary Sprung*

A A great deal has changed in Chicago and railroading since the 1940s. CREATE was designed to help the rail and road networks respond to those changes.

Believe it or not, the number of freight trains in Chicago is similar to the 1940s. But those trains look different — instead of transfer runs, or switch jobs, those trains are often large trains handling almost half the country's intermodal traffic.

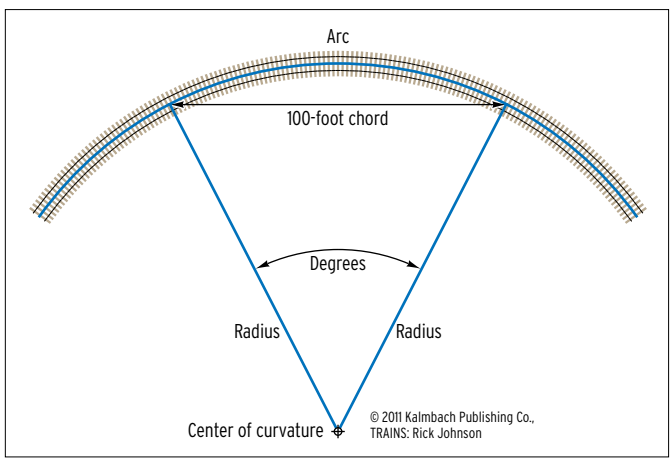
In the 1940s, more than 75% of Chicago's freight traffic was destined to more than 5,000 local shippers and receivers at sidings scattered through the city — now most traffic is concentrated at the 20-plus Chicago-area intermodal terminals. Chicago is by far this country's largest rail freight hub, handling two-thirds of east-west railroad interchange and growing.

What have gone away are intercity passenger trains, but before the pandemic there were still more than 700 commuter trains a day in Chicago. Handling future commuter and freight growth through shared junctions is a big reason for flyovers, like the recently announced Belt Junction project that will eventually enable Metra Southwest Service trains to serve LaSalle Street Station in the Loop instead of Union Station.

More than a third of the CREATE projects are 25 rail-road grade separations designed to reduce car and truck delays. They have grown as Chicago-area population has almost doubled from the 1940s to nine million people today. *— John Friedmann, former Norfolk Southern manager and board member for Belt Railway of Chicago and the Indiana Harbor Belt Railroad.*

Q Model railroaders measure the radii of their curves in inches, which is easily understood. The full-scale railroads measure their curves in degrees. Degrees are usually a measure of an angle. Would you explain? *— Alan Crouse, via Facebook*

A Railroad engineers in the U.S. use degree of curvature to determine the sharpness of a curve. The definition is found by connecting two points on an arc with a 100-foot chord, drawing radii from the center of the arc to the chord endpoints, and then measuring the angle between these radii lines. Degree of curvature has an inverse relationship with radius: The larger the degree of curvature, the smaller the radius of the curve, and hence the more restrictive it will be to train operation. For the sake of



For full-scale railroads, curves are measured in degrees, as illustrated here. A larger angle indicates a sharper, tight curve. Smaller angles reflect broad curves that generally allow faster running.

Two cylindrical cab signal antennas mounted above each rail and behind the front pilot of an EMD locomotive. The codes are transmitted through the rails and picked up by the antennas. Chris Guss

Cab signaling is what kept Union Pacific locomotives up front on its trains. Parts of the UP network were equipped with cab signalling until June 1, 2022, when most of it was shut down. Robert W. Scott

comparison, anything less than 1 degree 00 minutes (R = 5,729.65 feet) is considered to be a high-speed freight mainline curve, while loops at new unit train facilities, such as coal mines, are generally restricted to curves not sharper than 7 degrees 30 minutes (R = 764.49 feet). For slow-speed, lightly-trafficked locations away from main lines, such as industry spurs, the practical maximum degree of curve for new construction is generally considered to be 12 degrees 30 minutes (R = 459.28 feet), though this practice can vary according to various railroads' standards. It is worth noting that in the design of transit facilities, such as streetcar and light rail lines, curves are generally defined by their radius instead of degree of curvature because of the very small radii, which are common in constrained urban situations. Railroad design projects outside of the U.S. generally also specify curves by radius instead of degrees. — *David Honan, railroad design engineer*

Q Union Pacific was known for always having one of its own locomotives lead its trains. I have noticed trains on the UP between Omaha, Neb., and Chicago, being led by a foreign locomotive or devoid of UP locomotives altogether. Has the railroad dropped its policy that one of its locomotives lead trains on Union Pacific lines? *— Mike Daniels, Beaver, Iowa*

A The change wasn't a policy, rather the result of Union Pacific retiring its cab signal system on this corridor. Of the Class I railroads across the United States, Union Pacific was one of the few to employ cab signal equipment on certain main lines. On June 1, 2022, UP retired its cab signal system on a large segment of its remaining lines so equipped east of Cheyenne, Wyo. This allows any locomotive from any railroad with positive train control installed and cut in to lead trains on these main lines. Prior to June 1, PTC was already in use on these lines, though a Union Pacific unit equipped with cab signaling was still required to lead the train. The crew would set up and test the cab signal system then cut it out prior to departure. It would only be cut in and used in case of PTC failure enroute.

This leaves only Union Pacific's Portland, Ore., and Evanston, Laramie, and Rawlins, Wyo., subdivisions as the remaining trackage on the railroad with active cab signaling and the requirement that a UP cab-signal equipped locomotive lead each train. — *Chris Guss*

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MARCH 5, 2023: Jersey Central Train Show & Sale. Mother Seton Regional High School, 1 Valley Road, Clark, NJ 07066. Sunday, 9:00am-3:30pm. Admission: $7, children under 12 free, $14 family. Model trains, railroadiana, books, etc. Refreshments available. For information: Heinz Ricken, hricken@gmail.com, 908-272-3910, or Mitchell Dakelman, dakelmanm@aol.com, 908-208-2522

MARCH 11, 2023: Willamette Model Railroad Club Swap Meet. Kliever Armory, 10000 NE 33rd Dr., Portland, OR 97211. 9:30am-3:00pm. Admission: $6.00, 12 & under free w/paid adult. Free Parking. Food available. Website: wmrrc.com For information/table reservations: Roger Rees, wmrcswapmeet@gmail.com, or 503-256-2248

APRIL 1-2, 2023: Rocky Mountain Train Show. National Western Complex, 4655 Humboldt St., Denver, 80216. Saturday, 9:00am-5:00pm, Sunday 9:00am-4:00pm. 3 acres of model trains, all scales, 30 layouts, 700 sales tables, clinics and more. Admission $13.00, under 12/scouts in uniform FREE. Free Parking. 303-364-0274

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Storming through West Liberty

Iowa Interstate No. 6988, one of the railroad's two Chinese-built QJ 2-10-2s, roars past the former Rock Island depot in West Liberty, Iowa, on Aug. 22, 2021. Locomotive and train are deadheading to Wilton, Iowa, for a day of excursions sponsored by the IAIS and Central States Steam Preservation Association. Like many other QJ-powered excursions, the proceeds will support local first responders. In this case, the Wilton Fire Department benefits as funds will be used for new equipment. Wesley Chen

Commuting in the Potomac Valley

A Maryland Area Rail Commuter train, with GP40WH-2 No. 60 in charge, has crossed the Potomac River and is now making an outbound stop at the old Baltimore & Ohio Railroad depot in Harpers Ferry, W.Va., on Feb. 7, 2008. The train originated 81 miles east, at Washington Union Station. The crew will tie up for the night at Martinsburg, W.Va., 21 miles farther west. Todd Atkinson

This is Newark

One of Amtrak's Keystone Service trains, with AEM7 No. 949 on the point, calls on the Newark (N.J.) Penn Station, on Jan. 31, 2014. In just under two years, Amtrak will have retired the last of its AEM7s. Called "toasters" due to their boxy shape, Amtrak's AEM7 fleet ran over 220 million miles since it entered service in May 1980. Matt Donnelly


6904
6904

Morning in California

Shortly before 6 a.m. in San Luis Obispo, Calif., Jan. 9, 2022, Amtrak's *Pacific Surfliner* No. 774 prepares to depart on its coastal run. In just under 8 hours and after 26 stops, it will arrive at its destination — San Diego. Leading today is cab-control car No. 6904. Siemens SC44 No. 2119 is providing the power, pushing from behind.
William L. Steck

The full show

It's 9 a.m. on Dec. 27, 2006, at the Fullerton, Calif., depot. The place is hopping. Amtrak *Pacific Surfliner* No. 566, with EMD F59PHI No. 460, is on the left track. It's on the way to San Diego. A BNSF stack train holds the middle track. That's No. 4892, a GE C449W, on the point. On the right, Metrolink train No. 687 makes a stop on its trip to Los Angeles. This morning it's the full show at Fullerton. David Styffe

We don't stop here

Closed. No trains today, or for that matter, any day. It's April 16, 2014, as No. 2009, an EMD GP38, leads a 14-car merchandise train past the boarded-up Calumet, Quebec, depot. The former Canadian Pacific station sits along the Quebec Gatineau Railway, a 301-mile-long short line that is part of the Genesee & Wyoming system. Calumet sits halfway between Quebec City to the east and Montreal to the west, on the northern bank of the Ottawa River. Michael Berry

Suburban spring

The snow is gone, and a warm evening breeze rustles the emerging leaves and blossoms. It's spring in the Chicago suburb of Lake Forest, Ill. A Metra Milwaukee District North train has completed its stop here and continues its outbound trip on April 24, 2010. The Lake Forest station dates to 1900 and was constructed by the Chicago & North Western Railway.

Travis Dewitz

Whoosh — Perryville

Before entering revenue service on the Northeast Corridor, one of Amtrak's new Alstom Avelia Liberty high-speed trainsets rips through Perryville, Md., on a test trip. It's April 20, 2021. Amtrak has ordered 28 11-car Avelia Liberty trains to replace the current eight-car version of the Acela. Gary Pancavage

Travel by train

Looking like it's part of a late-1950s travel poster, one of Union Pacific's Heritage-fleet dome cars rests at Denver Union Station in July 2022. The station's rooftop neon sign has been a glowing landmark in the downtown skyline for nearly 70 years. Bob Lettenberger

From dark to light to dark

Emerging from the Hudson River tunnel and briefly into daylight, an NJ Transit train navigates the track maze heading back into darkness and New York's Pennsylvania Station. On May 13, 2014, Bombardier cab-control car No. 7043 is in the lead through subterranean Manhattan. Scott A. Hartley

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